

# The Mining Journal

## RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 944—Vol. XXIII.]

LONDON, SATURDAY, SEPTEMBER 24, 1853.

[Price 6d.]

### MR. JAMES CROFTS, of No. 29, CORNHILL, MINING BROKER.

Mr. J. CROFTS begs to OFFER his SERVICES for the PURCHASE or SALE of MINING SHARES of every description, and not being a DEALER, transacts business only for principals on commission.

Mr. CROFTS having resolved to extend his business, more generally in reference to DIVIDEND MINES, has on hand, or can procure, the best of those appearing in the London market, and in the columns of the *Mining Journal*, which, judiciously selected, will pay the highest rate of interest in the market.

A combination of causes, more or less temporary, has produced the most marked depression perhaps ever remembered in mining stocks; but its character is rather that of daily depression than in the nature of a panic, and hence it may be inferred that its continuance must gradually be arrested by the dissipation of the depressing causes, and a return to confidence. The description of shares most affected are those liable to calls, to which an almost indiscriminating neglect is shown, without reference to the merits or prospects of the mine, and such shares must unquestionably be those which will first feel the effects of re-action, come when it may. Young concerns upon which little capital has been spent may be described as almost totally unsalable, whilst, on the other hand, nearly all dividend mines find not only ready but eager buyers, and to a large extent, and on which sellers in general are realizing large profits, and buyers investing a large sum.

The following are particularly noticeable as *bona fide* concerns much reduced in value, and, therefore, safe to purchase at present rates:—

Clive	North Towy	Wheal Vanton	West Alfred Consols
Perran Silver-lead	South Towy	Perran Wh. Alfred	Tavy Consols
Cubert	Wheal Golden	Wheal Zion	Tamar Consols
Boringdon Consols	Trebell Consols	Wheal Trellawny	Rix Hill
Quintrell Downs	Great Badden	Wheal Carpenter (S)	Penilene Court
Combarnett Cons.	Devon Kapunda	Sydenham	Merrilyn
Wheal Wrey	Rock & Trevellyn	Wheal Brewer	East Tamar
Carn Darren	Silver Brook	East Wheel Rose	Balnoon Consols

Other PROGRESSIVE MINES most in demand are as follows:—

Eaglebrook	Wheal Sydney	Poltimore	Wheal Guskus
N. Wh. Trellawny	West Basset	Penilene (cop.)	Great Sheba
Trevellyn	Altarnun Consols	Lackamore (cop.)	Calstock Consols
Butterdon	East Russell	Wheal Robert	

Mr. CROFTS transacts every description of business through the medium of the Stock Exchange.

Hours of business:—Half-past Nine till Five, daily. Bankers—The London Joint-Stock Bank, Princes-street, City.

Dated Friday, Sept. 23, 1853, No. 29, Cornhill.

### MR. JAMES LANE, MINING AGENT, 33, THREADNEEDLE STREET, LONDON (Established 10 Years).

Begs to inform his friends and the public, that the SHARES which he is prepared to DEAL IN are not confined to the limits of an advertisement, but would refer to the general list of the *Mining Journal*, and is in a position to TRANSACT BUSINESS in any mines quoted in that list. Mr. LANE will furnish a list with latest prices on application.

### MR. H. B. RYE, begs to call the attention of his friends and the public to the following MINES, which, from being located in the BEST districts, under good management, are well WORTHY OF INVESTMENT, from their capability of producing GREAT RESULTS. SALES and PURCHASES effected in MINES of every description; and CORRECT LIST OF PRICES can be OBTAINED on application.

Bryntall	Gustavus	Pendarves Consols	Wheal Chiverton
Clive & Wentworth	Kirkcudbright	Tamar Consols	Wh. Kitty (Uny Lel.)
Cook's Kitchen	Leeds Town	Trevellyn Consols	Wheal Neptune
East Seton & Maude	Leant Conds.	West Wheel Franks	Wheal Trevellyn
Grabl. & St. Aubyn	North Downs	West Wheel Towan	Wheal Uny
Great Wheel Alfred	North Towy	Wheal Brewer	

77, Old Broad-street, London, Sept. 23, 1853.

### MR. R. Q. MANUEL, MINING OFFICES, No. 26, AUSTINFRIARS, LONDON.

Mr. MANUEL'S offices are expressly adapted for the use of companies and committees conducting their business in London; he advises in the technical, financial, and general arrangements of companies, conformably with the Cost-book system; and has also made arrangements whereby he is enabled to undertake the entire superintendence and management of mines, the laying out and erecting every kind of mining machinery, and reporting on mines and all mineral property.—Offices of the Great Cornish Copper Mine, Union Tin Mine, West Wheel Buller Tin Mine, &c. 26, Austinfriars, London.

### MR. JOHN S. LANE, No. 32, POULTRY, LONDON, begs to inform the public that he is in a position to OFFER SHARES at the following LOW PRICES:—

Alfred Consols, £23½	Leant, £19½	Tryphena, £2
Augusta Consols, 9s.	Loveden United, 13s. 6d.	Trevellyn Consols, 14s.
Broomfield Consols, 10s.	Leeds Town, 10s.	Tannack & Boscombe, £7.
Black Craig, £1	Merrilyn, £1	Tamar Consols, £2½
Boringdon Consols, £1	Mollard, £1	Trevellyn, £2
Bieton Consols, 10s. 6d.	Monarch, 7s. 6d.	Trevellyn, £2
Britannia, 13s.	North Damsel, 19s.	Wheal Golden, £2
Balnoon, £5	North Tamar, 19s.	West Wh. Edward, 6s.
Belvidere United, £6½	North Towy, 19s.	Wheal Norris, 6s. 6d.
Bryntall, £1	North Downs, £4½	Wheal Eckley, 10s.
Cave, £3½	North Wh. Trellawny, £6½	Wheal Mary Ann, £4½
Cardon Wood, 11s.	Poltimore, £1 2s.	Wheal James, 22s.
Combarnett Consols, 7s.	Perran Wh. Jane, 15s. 6d.	West Carpenter, 3s. 3d.
Corn Gwyn, 6s. 6d.	Perran Silver-lead, 15s. 6d.	Wheal Zion, £2½
Cwm Darren, 10s. 6d.	Penilene Mining Co., 8s.	Worthing, 1s. 6d.
Cubert, £2	Perran Wh. Alfred, 16s.	West Phoenix, £12½
Cook's Kitchen, £2½	Prince Albert Cons., £1¼	Wheal Procter, 15s.
Churchstoke, 15s.	Rhoswylod, £6½	Wheal Robert, 7s.
Crookhaven, £13½	Rorington Consols, 10s.	Wheal Katharine, £1¼
Devon Kapunda, £1¼	South Crever, £4	West Alfred Consols, £14
Devon & Court, £1	S. Devon Great Con., 15s. 6d.	West Holmbush, 4s. 6d.
East Seton & Maude, £4½	South Wh. Yealand, 15s.	Wheal Wrey, £1¼
East Bosorn, 15s.	South Towy, 9s. 6d.	Wheal Gill, £3¼
Eaglebrook, £12½	Sourton Consols, 6s. 6d.	Weston, £1¼
East Alfred Consols, 8s.	South Russell, 9s. 9d.	Whitford, 9s.
East Wheel Russell, £1	Sydney Godolphin, £4½	Wheal Samson, £2
East Lead, 15s. 6d.	Trebell, 15s.	Wheal Kitty, £3¼
Great Crinias, £1¼	Tasman Lead, 6s. 9d.	Wheal Lemon, £3¼
Great Wheel Hugo, 9s.	Tavy Consols, £2¾	Wheal Surprise, 6s.
Hamerton Consols, 15s.	Tremane, £12	Yealand Consols, £6
Langford & Baring, 15s.	Tremollett Down, 5s.	

P.S. Parties in the country wishing to purchase in any of the above mines will please to mention the number of shares they require, otherwise no notice can be taken of their applications. Any instructions to buy or sell should be punctually attended to.

J. S. LANE is a BUYER of Poltmore, Wheal Mary Ann, Tamar Maria, Trevellyn, Great Hwas, Great Bryn, Henneck, &c.

### MR. JOHN R. PIKE, begs to call the attention of his friends and the public to the following LIST OF MINING SHARES which he has for SALE.

Alfred, Great, £27	Darlington, West, £6	Norris, Wheel, 6s.
Alfred West Wheel, £14	Damsel, North, 17s. 6d.	Neptune, £3½
Balnoon Consols, £1	Darren, East, £100	North Towy, 15s. 6d.
Bell and Lanarth, £18	East Brech, £1	North Basset, 59s.
Birch Tor, £1	East Seton and Maude, £3	Perran Consols, 8s.
Bronford, 17s. 6d.	East Frome, £6½	Old Robert, £2
Boringdon Consols, £1¼	East Vor, 12s. 6d.	Pen-y-Gelli, £13½
Brewer, £16	East Halamanning, £1¼	Ralcig, £6
Buller, East, 26s.	East Russell, £4	South Towy, 7s. 6d.
Buller, North, £3½	East Basset, £47½	Sidney Godolphin, £3
Castle Dinas, 3s. 6d.	East Tolgus, £36	Stray Park, £2½
Clood Mawr, £7	Garro, £13	South Russell, 10s.
Cardon Wood, 11s.	Grabl. & St. Aubyn, £32	Sourton Consols, 11s.
Clive & Wentworth, £6½	Great Onslow, £1¼	South West Phoenix, £1¼
Combarnett Consols, 7s.	Gravel & Hendrich, 15s.	Speedwell, 20s.
Corn Gwyn, 6s. 6d.	Great Welsh, £150	South Caradon, £230
Crookhaven, £13½	Hawmoor, 15s. 6d.	Trevellyn & Barrie, £65
Cwm Darren, 10s. 6d.	Kilbricken, £1¼	Trevellyn, £6½
Carnyorth, £1¼	Kitty (Leant), £7½	Trevellyn, £6½
Carpenter (Gwinnar), £6½	Lewis, Wheel, £3½	Trevellyn, £6½
Cathedral, £2	Loveden United, 13s. 6d.	Trevellyn, £6½
Cupid, Wheel, £7½	Mill Pool, £7½	Trevellyn, £6½
Cook's Kitchen, £2½	Mounts Bay, £2	Trevellyn, £6½
Crookhaven, £13½	Mizen Head, £3	Trevellyn, £6½
Cundarrow, £142½	Mendip Hills, £4	Trevellyn, £6½
Carn Brea, £25	Merrilyn, £3½	Trevellyn, £6½
Comford, £30½	Nantock & Penrhin, £1¼	Trevellyn, £6½

J. R. PIKE, from a lengthened residence in the best mining district in the world (Redruth, Cornwall), and being in daily communication with respectable agents, is enabled to give capitalists advice in what is sound or otherwise, the present opportunity being a favorable one for investments. Any instructions forwarded to J. R. PIKE, for the disposal of shares, it is particularly requested they will state the number and time allowed, and that all such information be forwarded not later than Friday morning; and those parties who may entrust him with their business may rely on his giving them satisfaction.

South Sea Chambers, Threadneedle-street, City, September 23, 1853.

### MINING PROPERTY.—MR. HERRON has SHARES in the best DIVIDEND-PAYING MINES FOR SALE, and which will give the purchaser 15 to 20 per cent. for the outlay. Amongst others are the following:—

Great Devon Consols	Mary Anne	Carn Brea	Wheal Trethane
South Tamar	South Basset	Trevellyn	Coburn
Redford United	North Pool	West Caradon	Alten
Trevellyn	Wheal Seton	South Caradon	St. John del Rey
And has also FOR SALE SHARES in MINES having a PROMISING APPEARANCE, and affording greater range for speculation, such as:—			
Tamar	Treleigh	Halamanning & Croft	
East Russell	North Basset	Gothal	
Stray Park	West Basset	Wheal Uny	
North Downs	Hingston Down	Wheal Harriet	
East Buller	Trefusis	Wheal Cupid	

Miners Offices, 33, Clement's-lane, Lombard-street.

**PUBLIC SECURITIES.**—Corn has risen; colonial produce is higher; labour has advanced; the exports are increasing at the rate of £15,000,000 per year; the bullion and coin in the bank is less by £2,000,000; the reserve in the till of the bank is less by £6,000,000; the bills under discount are greater by £4,000,000; and the amount to the credit of the Chancellor of the Exchequer (notwithstanding his increased liabilities for next year) is less by £2,000,000, compared with the corresponding periods of 1852. Money, in consequence, is dearer; Consols are dropping; and the values of all other securities are more or less affected. The distrust begotten by the re-opening of the capital accounts, and the increased expenditure, suggests the decline in Railways. French Railways are fictitiously high, and at no distant period will come down with a crash. The gold mining and Jamaica copper companies, which at the onset were predicted would be failures, are gradually sinking. In English mines a host of schemes are wholly valueless; but there are some good dividend mines, perfectly free from debt, which divide their profits ( seldom less than 20 per cent. on present prices) every two or three months, and other promising mines rapidly progressing to a dividend-paying state under management of tried experience and known respectability, which are worthy the attention of capitalists. It is obvious that many securities are as extravagantly above as others are undervalued below their true value, and some are intrinsically worthless. To select such investments as are the most eligible and free from risk, certain data are requisite, to which few have access, which undivided attention alone can furnish, and which those only of considerable practical experience can correctly estimate. Every information afforded to capitalists desirous of investing capital or exchanging their securities; and sales and purchases effected upon the best possible terms. JAMES STEVENS TRIPP & CO., 33, Clement's-lane Lombard-st. Established 1839.

### GOLD, MINING, RAILWAY SHARES, &c.

Messrs. KENWORTHY & CO. TRANSACT BUSINESS in ALL DESCRIPTIONS OF STOCKS at the CLOSEST PRICES of the day; and ADVISE CONFIDENTIALLY with parties as to the best means of employing spare capital, either for speculation or permanent investment, whereby CERTAIN RETURNS are assured. Country interrogations promptly replied to.—Address, or apply, Kenworthy and Co., 37, Old Broad-street, City.

### MR. JOSEPH JAMES REYNOLDS, STOCK & SHAREBROKER, 21, THREADNEEDLE STREET.

MR. REYNOLDS has BUSINESS TO TRANSACT in the following MINES:—

Aqua Fria	East Wheel Russell	Penilene Min. Co.	Wellington
Alfred Consols	Eggar Lane	Penilene Court	West Abraham
Anglo-Californian	Exmoor Eliza	Possessance Consols	West Alfred Consols
Ass and Craiglog	Four Dargue (Cum.)	Perran (Silver-lead)	West Basset
Balnoon & Beacon	Garreg	Perran S. George	West Caradon
Bedford United	Gawton United	Phoenix Great Cons.	West Crinias
Bell and Lanarth	Golden Mile Lead	Poltimore	West Damsel
Bieton Consols	Golconda	Port Ph. & Col. Gold	West Darlingdon
Black Craig	Grabl. & St. Aubyn	Prince Albert	West Ding Dong
Borlase Consols	Great Beam	Quintrell Downs	West Stray Park
Boringdon Consols	Great Wyal Fortuna	Rix Hill	W. Phoenix (free sh.)
Boscawell Downs	Great Crinias	Red Dragon	West Providence
Boscan	Gt. Nugget Vein Co.	Rix Hill	West Russell
Botallack	Great Phoenix Cons.	Round Hill (Salop)	West Seton
Bottle Hill	Great Sheba Consols	Sidney Godolphin	West Sharp Tor
Brewer	Great Work	Silver Valley	West Trevellyn
Briford Consols	Great Wheel Alfred	Sourton Consols	West Wheel Alfred
Britannia Gold & Cop.	Great Wh. Badden	South Caradon	West Wheel Francis
Bryntall Consols	Great Wyal Fortuna	South Can Brea	West Wheel Robin
Burra Burra (Aust.)	Great Wheel Vor	South Condurow	West Wheel Russell
Callington	Gwallon	South Frances	West Wh. Treasury
Calstock Consols	Halamanning	South of Scotland	Weston
Cardon Wood	Herodfoot	South Tamar	Wheal Augusta
Carn Brea	Irish Con. Mining Co.	South Tolgus	Wheal Brewer
Carsons Creek	Kenneggy	South Towy	Wheal Catherine
Carnvannal	Kilbricken	South-West Phoenix	Wheal Cliffe
Casle Dinas	Leeds and St. Aubyn	South Wheel Basset	Wheal Comford
Cathedral	Leeds Towan Consols	South Wheel Level	Wheal Conquer
Clive & Colonial	Leant Consols	South Wheel Russell	Wheal Clifford
Combarnett Consols	Leant & Linares	Spearhead Consols	Wheal Golden
Comford	Lewis	St. Aubyn & Grylls	Wheal Helen (Breage)
Condurow	Little Duke	St. Day United	Wheal Henry (Wendron)
Condurow United	Marke Valley	St. Ives Consols	Wheal Fanny
Cook's Kitchen	Mary Ann	Stoke Clima and Con.	Wheal Fawcett
Copper Hill	Mendip Hills	Stray Park	Wheal Fawcett
Craddock Moor	Merilyn & Michell	Swamp	Wheal Fawcett
Crane and Bejawa	Mill Pool	Tamar Consols	Wheal Fort. (Breage)
Crow Hill & Cubert	Mixon	Tavy Consols	Wheal James
Cwm Darren	Mollard	Tees Side	Wheal Jane
Cwm Erfin	Mostyn	Therley	Wheal Kitty
Dalrhew & Darren	Nanasegallon	Thomas's United	Wheal Lemon
Devon Burra Burra	Nantlle Vale (slate)	Tincroft	Wheal Lemon
Devon Cons. North	Nant-y-Car	Trebarvah	Wheal Penny
Devon Great Cons.	North Basset	Trebarvah Consols	Wheal Procter
Devon Kapunda	North Basset	Trevellyn (Trethane)	Wheal Russell
Devon United	North Buller	Trevellyn	Wheal Reeth
Dolcoath	North Cornwall	Trevellyn	Wheal Robin
Duke of Cornwall	North Damsel	Trevellyn	Wheal Samson
Dyffryn	North Frances	Trevellyn	Wheal Seton
East Alfred Consols	North Levant	Trevellyn	Wheal Squire
East Basset	North Pool	Trevellyn	Wheal Surprise
East Black Craig	North Trevellyn	Trevellyn & Barrie	Wheal Trevellyn
East Buller	North Wheel Robert	Tristram	Wheal Trevellyn
East Darren	North Wh. Trellawny	Trumpet Consols	Wheal Trevellyn
East Halamanning	Nouveau Monde	Tyn-y-Worgid (sl.)	Wheal Trevellyn
East Margaret	Okel Tor	Tywardreath	Wheal Tryphena
East Pool	Old Wheel Basset	Tywardreath	Wheal Seton
East Russell	Orsedd	Ulpha United	Wheal Uny
East Seton & Maude	Par Consols	Union Tin	Wheal Wrey
East Tamar	Parkwyn & Carwals	Wheal Zion	
East Tolgus	Pen-y-Gelli & Crinias	United Mines (Gwc.)	
East Wheel Buller	Pendarv. & St. Aubyn	United Mines (Gwc.)	
East Wheel Reeth	Penhale Consols	Venton	
East Wheel Rose			

And SHARES FOR SALE in the West Cornwall Railway.

The present period offers to capitalists an opportunity which rarely occurs for PURCHASING in DIVIDEND-PAYING MINES, as well as in PROGRESSIVE MINES, the former paying dividends not less than 15 per cent., and the latter by a considerable increase of profit on the improved value of the property. Mr. J. J. REYNOLDS is at all times in a position to FURNISH the most ACCURATE INFORMATION for the guidance of capitalists, and to effect PURCHASES or SALES of stock of every description, upon the best possible terms, on the usual commission. Mines inspected by agents of experience and high respectability in any part of the kingdom within the shortest notice.—Sept. 23, 1853.

### MINING INVESTMENT.—T. FULLER and CO., 51, THREADNEEDLE-STREET, LONDON, beg to call attention to the favourable opportunity of INVESTING in BRITISH MINES, particularly in those dividing their profits every two or three months, which average from 15 to 20 per cent., with every prospect of continuance, and being free from fluctuation, such as Gold, railway, and other securities; and respectfully direct attention to the PURCHASE SHARES in many PROGRESSIVE MINES, being in full operation, with efficient machinery, &c., for the development and bringing the same into a profitable state of working, which, at present prices, cannot fail to remunerate all who invest; a careful selection of such alone can be obtained by a daily communication with agents of high scientific and practical experience of the principal mines in Devon, Cornwall, and Wales.

T. FULLER and Co. will furnish every information to capitalists, either personally or by letter, and can effect purchases or sales of every description.

### TO THE MINING PUBLIC.—GEORGE RUDGE begs to inform

his friends and the public that he has taken OFFICES at 5, UNION COURT, OLD BROAD STREET, where he will be glad to receive their orders for the buying and selling of all description of mining property, at the closest prices of the day.

### WORTHY THE ATTENTION OF MINING ADVENTURERS.

FOR SALE, SHARES in the following MINES:—Botallack, Boscan, Chiverton, Boringdon Consols, Ardenne, Trevellyn Consols, Devon Kapunda, Peru, Pencon, Trevellyn, Tryphena, Wheal Harriet, Bodmin United, Perran United, Trevellyn, Par Consols, Leeds Town, St. Aubyn and Grylls, West United Hills, Clive United, West Alfred Consols, Poltmore, Keswick, Cubert, North Wheel Uny, Carnvannal, Carpenter (South Sydenham), Great Wheel Badden, Nantock and Penrhin, East Wheel Alfred, Wheel Messenger, Great Guskus, Tavy Consols, Perran Silver-lead, Wheal Sarah, La Min, and North Fowey, with several others.—Application, or letters, to be addressed to JOHN BEALL, 1, Three King-court, Lombard-street, London.

### RAILWAY WAGONS.—WM. A. ADAMS, MIDLAND WORKS, BIRMINGHAM.

BROAD AND NARROW GAUGE COAL AND IRONSTONE WAGONS, IN STOCK—FOR SALE OR HIRE.

### COBALT AND NICKEL.—ALFRED SENIOR MERRY, REFINER AND PURCHASER OF COBALT AND NICKEL ORES, AND ASSAYER IN GENERAL.—Address, LEE CRESCENT, BIRMINGHAM.

NICKEL AND COBALT REFINING, AND GERMAN SILVER WORKS, MILL STREET, BROAD STREET, BIRMINGHAM.—STEPHEN BARKER begs to inform the Trade that he has the following articles for sale:—

REFINED METALLIC NICKEL. OXIDE OF COBALT. [WIRE, &c.] REFINED METALLIC BISMUTH. GERMAN SILVER—IN INGOTS, SHEET, NICKEL AND COBALT ORES PURCHASED.

### L. WILSON, AND BELL, NEWCASTLE-ON-TYNE, MANUFACTURERS OF BAR-IRON, RAILWAY BARS, FORGE AND ENGINE WORK, CAST-IRON GOODS, AND STEWART'S PATENT CAST-IRON GAS AND WATER PIPES. OFFICE.—7, 8, 9, LANE, LONDON.

### IBBOTSON BROTHERS AND CO., SHEFFIELD, STEEL AND FILE WORKS; also COMMISSION MERCHANTS for the SALE and PURCHASE of every description of MACHINES and MACHINERY, and every article used by engineers, too numerous to enumerate in an advertisement.

### MR. THOMAS EDINGTON (lately Senior Partner of the Phoenix Ironworks, Glasgow), IRON MERCHANT AND CONTRACTOR, INSPECTOR OF RAILWAY BARS AND CASTINGS, No. 17, GORDON STREET, GLASGOW.

### MESSRS. DISTIN AND CHAFE, ENGINEERS, DEVONPORT, MANUFACTURERS OF PUMPING, DRAWING, STAMPING, AND OTHER CONDENSING STEAM-ENGINES, CHILLAN MILLS, STAMPING, CRUSHING, AND EVERY OTHER DESCRIPTION OF MACHINERY. Gold companies supplied with machinery and mining tools to any extent; and competent engineers engaged to erect and work machinery in Australia and California.

### TO RAILWAY COMPANIES, CONTRACTORS, &c.—JAMES LAWRIE AND CO., COUSIN LANE, UPPER THAMES STREET, supply RAILWAY CHAIRS AND SLEEPERS, FISHING PIECES, BOLTS AND NUTS, SPIKES, AND TIE BARS, COLUMNS, GIRDERS, SOCKET PIPES, AND ALL KINDS OF IRON CASTINGS. Also, HENDERSON'S PATENT DERRICK CRANES.

### GEORGE MOORE, MINING BROKER, 32, NICHOLAS LANE, LOMBARD STREET, has for SALE SHARES in the following MINES:—

Boringdon Consols, £1¼	St. Austell Consols, £1¼	Wheal Uny, 10s.
Clive, £1¼	N. Brit. Australasian, £1	Wheal Zion, £2½
East Wheel Russell, £3	Trevellyn, £3	West Wheel Jane, 12s. 6d.
East Wheel Vor, £1 1s.	Tavy Consols, £2¼	Wheal Treasury, £1 1s.
Loveden United, 15s.	Wheal Robert, 5s.	Yealand, £6
Monarch, 6s.	West Wheel Alfred, £1¼	

12th share in the Royal Hibernian Mining Company, £35. And will BUY in North Robert. Every description of mining property PURCHASED or SOLD for the usual commission.

### BRITISH AND FOREIGN FUNDS, RAILWAY, AND MINING SHARES BOUGHT OR SOLD FOR LONG OR SHORT PERIODS.

Authentic records and statistics, showing the status and prospects of these securities, together with the leading features and ingredients of the money market, which for a time affect their value, are correctly compiled for the use of principals, the undersigned making it his care so to analyse the official accounts, and to collect such facts as will aid capitalists in forming a correct judgment in their investments, and materially guide them in their speculations. MINING SHARES are greatly depressed, not only by the causes affecting other securities, but also by the numerous new adventures which have deluged the market, and been followed up with frequent calls, obliging holders of *bona fide* and intrinsically valuable mines to sell their shares; but these circumstances afford most favourable opportunities for making very advantageous investments in the latter kind, correct information of which can be obtained on application to E. H. TRIPP, Castle-court Chambers, Birchin-lane.

### MR. E. H. TRIPP is prepared to DEAL in the following, at the CURRENT MARKET PRICES, viz:—

Alfred Consols	Condurow	New So. Wales Coal	Union Tin
Bedford United	Linares	Nant-y-Car	West Basset
Castle-court Chambers, Birchin-lane.	New So. Wales Gold	Poltimore	Wheal Golden

### MESSRS. POWELL AND COOKE, MINING AGENTS, No. 1, CROWN COURT, THREADNEEDLE STREET, LONDON.—Messrs. POWELL and COOKE respectfully direct the attention of their friends and the public to the present FAVOURABLE OPPORTUNITY to PURCHASE SHARES in many first-rate PROGRESSIVE MINES, the prospects of which, and the present prices of the shares, cannot fail to remunerate all who invest. The following are the names of the mines:—Yealand Consols, Wheal Sydney, Boringdon Consols, East Russell, Wheal Russell, Wheal Arthur, Wheal Edward, Hemerdon Consols, Great Wheel Hugo, Eaglebrook, Trevellyn, Tavy Consols, Thomas's United, Balnoon Consols, South Looe, South Yealand, and West Wheel Jane. Several of the above mines are now making profitable returns.</



# THE LONSDALE COPPER AND SILVER-LEAD MINING COMPANY, ENNERDALE, CUMBERLAND.

Divided into 2100 shares, issued in Certificates to Bearer at £5 each, all paid up. No further call to be made.—No liability whatever.

**COMMITTEE.**  
EDWARD WILLIAMS, Esq., Homecroft House, Calstock, near Tavistock.  
FRANCIS CODD, Esq., Morley-square, Devonport.  
Mr. THOMAS KNIGHT, mining engineer, Calstock, Cornwall.  
Mr. WILLIAM CURNOW, mine agent (for Messrs. Williams, Scorrier House, Freeto, Calstock, Cornwall).  
Mr. JOHN SIMS, Slimeford, Calstock, Cornwall (mine agent more than 20 years with Messrs. Williams, Scorrier House, Freeto, Calstock, Cornwall).  
(With power to add to their number.)

**BANKERS.**—Messrs. Head and Co., Whitehaven; Messrs. Masterman, Peters, and Co., London; Devon and Cornwall Bank, Tavistock and Devonport.

**SOLICITORS.**—Messrs. W. and L. Lumb, Whitehaven.

**MANAGER.**—Mr. John Sims. **RESIDENT AGENT.**—Capt. John Oxnam.

**OFFICES.**—SLIMEFORD, CALSTOCK, CORNWALL.  
This property comprises the waste lands within the Manor and Forest of Ennerdale, near Whitehaven, Cumberland; being in area upwards of 30 square miles; granted by the Right Hon. Earl of Lonsdale, for a term of 21 years, at 1-15th royalty. The property is surrounded by well-known and proved good mines of copper, silver-lead, and black lead, as shown in the plan annexed. The facility for working is almost unparalleled in the annals of mining. No other machinery will be required than a water-wheel for crushing and stamping the ore, which will be brought to the dressing-floors by tram-wagons, through cross-cut levels in the mountain sides, as also shown in the plan. Reports from some of the best men in the mining world will show the value of this extensive property. The present proprietors having discovered and laid open some valuable lodes, as the following reports will testify, parties are invited to inspect for themselves. The mines being situated amidst the bold and magnificent mountain scenery of West Cumberland, and near the beautiful Lake of Ennerdale (within the bounds of this royalty), offers an opportunity for a delightful pleasure excursion, with an inspection of these mines.

The present proprietors think it but fair to retain for themselves 700 shares, and offer to their friends and the public 1400 shares, at £5 each, to form a working capital of £7000, being double the estimated sum required; thereby making sure that no further call will be made, or liability incurred by the shareholders. It can readily be seen that an immense quantity of ore will be returned before one-half the capital is expended, thus making the exploring self-supporting; for, in fact, a return may be made immediately the dressing-floors and road are formed, and the water-wheel, crushers, and stamps are put up.

Applications for shares may be made to W. and L. Lumb, solicitors, Whitehaven; Messrs. Head and Co., Carlisle; Messrs. Thomas F. Dickenson and Co., 24, Dean-street, Newcastle-upon-Tyne; Messrs. T. W. Flint and Co., Hull; Messrs. H. Woodcock and Co., Leeds; Messrs. Harrison and Breton, 32, Castle-street, Liverpool; Messrs. Croker Brothers, Plymouth; Peter Watson, Esq., 3, Old Broad-street, London; and Mr. John Sims, Slimeford, Calstock, Tavistock.

## REPORTS.

**EXTRACT OF A LETTER FROM JOSEPH TILLER (A CORNWALL MINER).**  
Dec. 17, 1852.—We have taken possession of this property, and are happy to say Capt. Oxnam's statement, as far as I have yet seen, is correct. I have seen 30 fms. on the back of the branch, which is north of the great lode. I like its appearance much. I broke some beautiful ore, good work. The rubbish from the mountain has covered the ground; and we shall be cleared away before I can see it. The top of the mountain is in the clouds, and covered with snow. We have a sett large enough—four miles east of where we began to work, and several miles west.

**FROM CAPT. JOHN OXNAM.**  
Dec. 17, 1852.—We went up to the copper mine yesterday, and saw the north lode for 30 fms. in length, and from 20 to 30 in. wide, one-half ft. for the market, worth from 2s to 2s 6d per ton. The south lode is covered with rubbish. We have four miles east in the mountain, west half-a-mile to the foot of the mountain, one mile across the valley, then several miles in another mountain. I hope you will not part with the shares. We shall do well; we cannot miss.

**Jan. 6, 1853.**—I have sent you a box of ore, No. 1, from the north lode, 2½ feet wide, composed of spar and ore. No. 2, north part of south lode, 4 ft. wide—spar, black, green, and yellow ore. No. 3, south part of south lode, 3 ft. wide. No. 4 is a mixture. The lode altogether is 10 ft. wide; the middle part is gossan, spar, munda, and ore.

**Feb. 8.**—I am surprised to see the standard of copper ore. If we had a road, and things ready for dressing, we could send a great deal of ore to the same quality as No. 3, produce 7½, that is the north part of the south lode; will turn out 5 tons of ore per fm., and when dressed will be of higher produce. No. 5, produce 8½, from the north lode; will turn out 1½ tons of ore per fm. No. 4 is the clay on the back of the south lode above No. 3. Nos. 1 and 2, south part of south lode, which is near the surface, and not settled. You wish to know if it is likely to be a lasting mine. These mines will be worked years after I am dead and gone.

**April 16.**—We have been over the mountains. The sett is ten miles long, and four miles wide. In the eastern part of the sett we have a lead lode. We have driven through the copper lode, 11 ft. wide; the south part is spar, munda, and yellow ore; the middle part is gossan, spar, peach, munda, and ore. For about 3 ft. wide, the north part on the foot of the ore is black, green, and yellow ore, 5 tons per fm. From the foot of the mountain up to where we see the ore is 170 fms. perpendicular. The top of the mountain is 90 fms. above this.

**FROM MR. JOSEPH ROBERTSON, F.R.S.**  
The copper mine is situated on the west face of High Craig, at an elevation of about 1000 ft. above the bed of the River Liza, opposite the mountain pass of Black Sall, and five miles from Ennerdale Lake. Four drifts have been made at a remote period, in two of which a 3 ft. wide lode has been worked to a slight extent. The present miners have made a cross-cut drift, and proved a junction of the 3 ft. lodes, which now show a lode 12 ft. wide, and of unknown depth. The present miners (three of whom are Cornishmen) are most sanguine of success in obtaining a mine of great richness. The quality of the ore is unquestionable; from samples tested, the average appears about 7½ per cent. copper (without dressing). The lode will most probably increase in quality as it descends deeper into the mountain. I am of opinion that the diverging 3 ft. lodes will be found on the opposite side of the dale, between the sientic and the slate rocks, and although of diminished size, will yield a profitable return, if we had and crushed in connection with the principal mine. As to the ore out by tram-wagons to the crusher, stamps, and dressing-floors, close at hand, which will then be conveyed by carts to the lode, and thence by a small cart, every reason to believe the speculation genuine, and capable of large development, as from the apparent course of the lode, it may be expected to continue miles in this royalty, whilst it may be calculated to yield a ton of ore per fm. in its present state.

**FROM MR. JAMES DEES.**  
Mr. Robson and I were up in Ennerdale on Tuesday, when we carefully examined the new copper mine and neighbourhood; we saw the miners, who are very sanguine of the success of the mine, and I think there is every prospect of its being a very valuable concern. The line of the vein is clearly defined for a considerable distance down the side of the mountain. The miners have found some old drifts in the vein, and in one place they have come upon the intersection of two veins, where the ore-bearing rocks are 12 ft. wide, the whole of which, I am convinced, will yield 7½ per cent. of copper. I saw some samples of ore from the different portions of the veins, with the yield of each as found by the assayers, and think there is no doubt the average will be fully 7½ per cent. At the sale of copper ores in Cornwall, for the week ending 22d March, the average per centage was 5½, and the average price £5 18s. per ton. At the same rate, the Ennerdale ore ought to be worth £8 4s. per ton; and I have little doubt but that in the course of 12 months they will be enabled to raise upwards of 200 tons per month. There is no doubt the lode extends across the valley into the pillar mountain, which in your lordship's (Earl of Lonsdale's) royalty, and where, in a short time, quite as much ore may be got. In addition to what I have stated to his lordship (the Earl of Lonsdale), I can likewise say, that the nature of the ground, from the head of Ennerdale Lake to the mine, is very favourable for making either a cart road or tram-way; and at a very slight expense a sufficient head of water could be got both for crushing and washing at the mines. I learnt from your miners yesterday that you are driving a cross-cut adit lower down the mountain; this I think a very judicious course to adopt, and I have no doubt you will soon cut the lode.

**FROM CAPT. JOHN PAUL.**  
Descent Mines, July 4.—Agreeably to request, I have visited the above mines, accompanied by Capt. John Oxnam and Mr. Tiller, who are both practical and well-informed persons, and who at present are the resident representatives of the company. The sett or mine property is extensive, extending over the large Manor and Forest of Ennerdale, and held under lease, granted by the Right Hon. Earl of Lonsdale, for 21 years, at the reasonable rate of 1-15th royalty. Having travelled nearly to the head of Ennerdale, I was convinced that the whole of the lode, which is of considerable extent, have laid open a large and powerful copper lode, which at surface, for 4 or 5 fms. in length, is 10 ft. wide, running about 45° south of east by north of west, and underlying about 30 inches in a fm., carrying a regular north wall in a stratum of light green, or slate; the lode is composed of great strength of gossan, mineralised green steins, prair, spar, and interspersed throughout with grey, black, and yellow copper ore. On the north wall runs a leader, or better part of the lode, about 3 feet wide, of good quality, which should yield 5 or 6 tons of copper ore per fathom, which broken down together, and average samples of the lode for that width taken (without being dressed), is said to assay 7½ produce. On the north side, at this point, a branch, about 1 ft. wide, goes off, running from 10° to 20° south of east, called the north lode, with the usual underlay, and of favourable description. A sample of the ore from this lode has also been taken, and reported to assay 8½ (without dressing). At some 30 or 40 fms. west of this point a level is now driving eastward, 21 fathoms on the course of the lode, which will come in some 10 or 12 fms. below the ore seen at surface, and which may be looked forward to with favourable results. The lode in parts of this level is also of good strength, and is yielding some saving work; the ground is favourable for driving, varying from 60s. to 80s. per fm. and were this level extended some 200 fms., or thereabouts, to the summit of the hill, the rapid rise would leave clear 100 fms. of perpendicular height over this level to stoep, if found productive; but as it may reasonably be considered that the lode requires a weight of ground about it to make it more permanent, and of regular produce, the most prudent and effectual way to prove and work the mine will be to go down so near to the bed of the river as to allow only a sufficient fall for a dressing-floor below the level's mouth, and there place a good head cross-cut level, some 60 or 70 fms. north, and cut the lode, which will come in upwards of 100 fms. below the level now driving, thereby discharging all the stuff through the lower level to the dressing-floors, with backs of 200 fms., or thereabouts, of high and drained ground. No expense in the erection of machinery will be required, otherwise than a crushing mill to crush the ores, for which an ample supply of water for all washing purposes is running by in the dry season. The mine is situated from 15 to 16 miles from the sea-port town of Whitehaven, from which a good road extends to within four miles of the mine. To continue this road to the mine, for which the ground is well situated, and amply supplied with excellent materials, the expense incurred would not be more than £100 to £500. The facilities here will fully compensate the disadvantages of carriage, as all the mines can be available through the assistance and expense of steam or water power. At some 400 to 500 fms. north of the copper lode a small portion of work has been done at the surface, as from former period, upon a lead lode running 45° south of east; this lode is about 18 in. wide, with good spots of lead ore of a favourable quality, and also worked by levels, over which runs a stream of water sufficient for all the purposes. The property being nearly free from claims for mineral rights, and other economic facilities and favourable prospects, nearly all the expenses of the company may be applied in exploring and proving the value and extent of the lode, indications warranting the practicability of the trial, for which

only a slight capital is requisite. I hope and fully expect that this speculation will prove a profitable result to all interested.

**FROM CAPT. JOHN DEES.**  
This valuable piece of mining property has been obtained by lease for 21 years from the Right Hon. Earl of Lonsdale, at 1-15th dues. The sett is very extensive, spreading over all the Manor and Forest of Ennerdale, containing about 30 square miles, the western boundary reaching within eight miles of Whitehaven; it is bounded on the east by Borrowdale black lead mines, on the west by Kinniside silver-lead mines, on the north by old copper mountain mines, and on the south by W. Sutherland's Consols copper and silver-lead mines. From the well-known and proved mineral districts surrounding this very extensive sett, no doubt many valuable lodes of various minerals will be discovered. There were no indications visible in this sett, of the fact sufficient that several lodes in these districts, including the almost priceless one of plumbago or black lead, point towards, and evidently intersect it in many directions; but two lodes have been already discovered—one is a north and south silver-lead lode, the size of which is not yet ascertained, although the quality is of a high order; the other is an east and west lode of copper, of very great promise, and of large dimensions, being fully 10 ft. wide, which it is calculated will yield 5 tons of ore per fm. from the north and south side; the middle part is about 5 ft. wide, composed of gossan, barytes, munda, and ore, and shows well for the latter increasing in quantity as well as in quality as the depth of the lode increases. The point where the copper lode has been laid open is situated on a mountain side, about 200 fms. upwards, and as it underlays south with the dip of the mountain, it can be worked at a very moderate expense; viz., by merely driving cross-cut levels, and bringing the ore out in tram-wagons to the dressing-floors in the valley, where the River Liza is of sufficient power in the dryest time for all the purposes of crushing, stamping, and dressing. There will be required for the necessary works an outlay of £3000 and £4000—a sum sufficient to form a road from three to four miles in length through the valley from Gillerthwaite to the dressing-floors, which, with water-wheel, crusher, stamps, convenient houses, cross-cut levels, the driving, rising, and sinking of the lode, will lay out the mine in proper order—a thing of the first consideration in securing large returns of ore, and paying good dividends to the proprietors. Besides the present lodes of lead and copper, it is expected with every probability that the Borrowdale plumbago or black lead lode will be found in the eastern part of this sett; while from the near neighbourhood of the old copper mountain, which has been worked from east to west throughout a large mountain, other rich lodes may yet be found.

**LETTER FROM JOSEPH TILLER.**  
August 20.—Sir: We have cleared out the foundation for the building, and got stones all on the spot ready for the mason. We have also commenced the deep adit level in the same place you pointed out when here. You will please have the stones sent you tested for copper, silver ores, and cobalt. They are from a new lode, just discovered. Should either of the stones be good, we can get any quantity from the Red Pike Mountain, there being a large lode of it there, and some very good copper green interspersed with it. Should you wish to get more for your sample, we will send it you. If the samples from Red Pike Mountain be copper, silver, or cobalt, we can get enough of it. I consider this discovery to add some thousands of pounds to the value of the mines. We have also found a lump of black lead, about half-a-pound weight, 50 or 60 fms. down the gully from Red Pike. We have not yet met with the black lead lode. This is a valuable sett.

## THE TOWN SLATE QUARRY COMPANY, MERIONETHSHIRE.

Capital £25,000, in shares of £1 each, to be paid up on allotment, and issued in certificates to bearer of not less than 100 shares. No further liability beyond the amount of the shares taken and paid upon.

**COMMITTEE OF MANAGEMENT.**  
RICHARD FIELD, Esq., 34, Coleman-street, City.  
WILLIAM FITCH, Esq., 2 and 3, Old Fish-street-hill, Upper Thames-street, City.  
EDWARD MARTIN, Esq., (of Martin and Wood), Market Wharf, Regent's-pk.-basin.  
JAMES PHILLIPS, Esq., 34, Bush-lane, Cannon-street, City.  
EDWIN TOMLINSON, Esq., 16, Ironmonger-lane, City.

**BANKERS.**—London and County Bank, Cannon-street.  
**SOLICITORS.**—Messrs. Child and Son, 62, Cannon-street.  
**SECRETARY (pro tem).**—Mr. Robert Simpson.  
**BROKER.**—Edmund Solleux, Esq., 33, Royal Exchange.  
**OFFICES.**—5, LAURENCE POUNTNEY LANE, CANNON STREET.

## PROSPECTUS.

The object of this company is to work an almost inexhaustible vein of blue slate, situated five miles to the north of the port of Aberdovey, in the county of Merioneth, and a few miles west of, and on the south-western Merioneth slate range. The vein is in proximity to the celebrated Aberllefenny Quarry. Other quarries have recently been opened upon the same vein, and are already making handsome returns. The lease of this valuable quarry is for 50 years, at a royalty of 1-14th; the extent of the sett is above 300 acres. There is an ample supply of water power, and natural facilities for forming a large reservoir on the highest part of the property to work the machinery.

The vein is upwards of 40 yards in width, and runs north and west through the entire length of the sett. It is situated close to the turnpike-road leading to the shipping port of Aberdovey, which bounds the sett on the south, and presents unusual facilities for working; the head covering being remarkably thin, and in some places consisting in great part, if not altogether, of a wet peat bog; while the vein sloping upwards on the side of a hill from the road, presents great facilities for forming the levels for drainage, and for carriage to the road, at but little expense, the hollows on either side affording the means of disposing of rubble and waste to any extent, and at little or no expense.

The vein has already been opened sufficiently to develop the quantity and quality of the slate, there being an entire absence of sulphur or any other deteriorating compound; hence the quality is in the highest degree satisfactory, especially as the slate taken 10 fms. from the surface, is equal to that taken at a much greater depth in the neighbouring quarries, and every marketable size can at once be obtained. The slate can be delivered at the Port of Aberdovey, from whence shipments can at all times be made, at 4s. per ton, or about one-third of the carriage paid by neighbouring quarries, yielding large returns, and which of itself (taking into consideration the much less chance of breakage) forms a very considerable guarantee for the success of the undertaking.

Captain Edward Davies has reported that the quarry will be working to profit from the expiration of the first six months; and that the expiration of the first two years, 200 men at least can be employed, taking the profit at half that usually calculated upon, and after paying all expenses, including a reserve fund to repay the capital laid out, will give a profit of 20 per cent. on the capital. As the continued working opens up a large area of the face, employing a larger number of men, the dividends will thus be continuously increasing.

The estimates of working expenses show that each quarry will cost £2000 in opening and fully developing. It is intended to open at first four quarries, and erect suitable machinery; but as the vein presents facilities for working on a very large scale, the committee do not hesitate in expressing their belief, that it will ultimately become one of the most productive, and one of the most profitable undertakings in North Wales. The committee, from personal knowledge, are aware that two similar undertakings are being respectively £4000 and £500 per cent. on the paid-up capital, besides having repaid to the shareholders, from the reserve fund, the whole of the original amount. The demand for slate for building purposes has for years been far beyond the supply. The quarries at present in work cannot possibly execute new orders for one to two years; and when the increasing demand for slate for paving and numerous ornamental purposes is taken into consideration, it is apparent that a quarry producing such a quality of slate and slab as can be produced from the Town Quarry, cannot fail to prove a most lucrative investment.

Specimens of the slate from 10 fms. from the surface, reports, plans of the property, and estimate of the working expenses, can be seen at the office of the company, 5, Laurence Pountney-lane, Cannon-street, City, where prospectuses with printed forms of applications for shares may be had.

**ROBERT SIMPSON, Sec. pro tem.**

**REPORT.**  
Ty-mawr, near Machynlleth, July 25, 1853.—The Town Slate Quarry is situated five miles to the north of the port of Aberdovey, in the county of Merioneth, and a few miles west of, and on the south-western Merioneth slate range; the vein is in proximity to the celebrated Aberllefenny Quarry. The quantity of land actually surveyed and mapped is 275 acres. There are a few acres besides that have not been surveyed. The slate vein is upwards of 40 yards in width, and runs the entire length of the sett for nearly a mile. From all appearances, the quarry will produce slate of a very marketable size, and of the finest texture. The ground rises gradually from the south end of the vein to the north end, showing the greatest facility, and extent of fall for all the refuse and covering. The present tunnel is for the first of a series of quarries. It is 7 feet high, by 7 feet wide, driven into the vein, which it cuts at a depth of 20 yards below the brow of the hill. The tunnel opens the first quarry in a wet peat bog, and from this circumstance it is expected the only head covering to be taken away will be the peat. Should it prove so, such an extent of vein will be immediately available for profitable working that is seldom met with so soon. At the lowest part of the sett runs a stream of water which will be useful in working the machinery. But the most important feature connected with this property, is its close proximity to the port of Aberdovey, where vessels of the heaviest burden can at all times load; and the water being close at hand, and the level of the water being equal to other quarries in the neighbourhood. The quantity of monthly product will be limited only by the number of quarries opened, and also the power and efficiency of the machinery erected.

**EDWARD DAVIES.**

## FORM OF APPLICATION FOR SHARES.

To the Committee of Management of the Town Slate Quarry Company.

GENTLEMEN,—I request you to allot me shares in your company, and I hereby undertake and agree to accept the same, or any less number, and to pay the amount thereof when required so to do. I am, Gentlemen, your obedient servant,

Name in full \_\_\_\_\_

Residence \_\_\_\_\_

Reference \_\_\_\_\_

Profession or business \_\_\_\_\_

Date \_\_\_\_\_

Signature \_\_\_\_\_

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# WEST CARROLL SILVER-LEAD MINING COMPANY, NEWLYN, CORNWALL.

Divided into 12,000 shares of £1 each, 6000 of which only to be issued to the public, the remaining 6000 being retained by the original proprietors.

**DIRECTORS.**  
THOMAS HICKS, Esq., Truro.  
JOHN BISHOP, Esq., Howland-street, Fitteroy-square.  
H. W. COCKING, Esq., Charlwood-street, Pimlico.  
JOHN DAVIS, Esq., Temple.  
JOHN BEALL, Esq., Three King-court, Lombard-street.  
**BANKERS.**—London and County Bank.  
**SOLICITORS.**—Messrs. Bishop and Son, 32, New Bridge-street, Blackfriars.  
**BROKER.**—W. T. Gooch, Esq., Bartholomew-lane, and Stock Exchange.  
**SECRETARY.**—J. T. Fielden, Esq., 8, George-yard, Lombard-street.

This sett is situated in the parish of Newlyn, Cornwall, and adjoins the celebrated East Wheal Rose, which has already paid in dividends, £2245 on each £50 share. The principal lodes of this valuable mine pass through West Carroll, as also the leading lodes of Old Shepherds, North Shepherds, Wheel Constance, Penhallow Moor, Wheel Hawkins, &c., which the plan will show, as also the annexed reports of Captain Champion and others. Capt. Champion (the Captain of West Carroll) was connected with Old Wheal Rose and East Wheal Rose for 30 years, and has the most implicit confidence that the adventurers in West Carroll will find her prove as rich a dividend paying mine as East Wheal Rose, Old Shepherds, and Penhallow Moor Mines.

Applications for shares to be made to W. T. Gooch, Esq., Bartholomew-lane; or to the secretary, at the offices of the company, 8, George-yard, Lombard-street.

Copy of Report from JOHN CHAMPION, Captain of East Wheal Rose.

**WEST CARROLL SILVER-LEAD MINE.**  
East Wheal Rose, June 11.—Being about to commence a new adit from Wheal Constance, to cut a large chamber lead lode, which runs entirely through our sett, we shall intersect several other lodes, from which we anticipate the most favourable results. We shall also clear an adit that had been taken up from East Wheal Rose adit (see the plans near Nanhellian, red line, lead lode) in an east and west direction. This adit will enable us to cut other lodes, and to prove the lode we drive on several fms. in depth. The ground about the lodes in this sett is very highly mineralised, and on the backs most of them contain lead ore. Knowing, as I do, all the lodes in this locality, I shall be happy to be your agent to work West Carroll, to which, I presume, your friends will not object; but on the other hand, would rather wish it when I tell them that I took a license of East Wheal Rose precisely in the same way I have taken them, which is driven on about 5 or 6 fms.; this was driven upwards of 30 years back. This lode is from 2 to 3 ft. big—contains beautiful gossan and spots of lead; this is called Champion lode. In driving east on this lode into East Wheal Rose, I discovered East Wheal Rose. There is another lode that goes through this sett, called Penhallow Moor, lode a north and south one. This lode is from 4 to 5 feet wide, composed of gossan, blue flooken, soft spar, and lead ore. This is a very promising lode for making an abundance of lead. There are two east and west lodes that run in this sett—North Shepherds and Wheel Hawkins—which both levels contain lead. By driving north on the large gossan lode, will cut the two east and west lodes. This is a very extensive sett, about 600 or 700 fms. east and west, and about one mile from north to south. It is our opinion, by good management, that this will make a good and lasting mine. Shepherds Old Mine joins this sett also.

**JOHN CHAMPION, East Wheal Rose.**

**ARTHUR CUNDY, Wheal Constance.**

**West Carroll Mine, Newlyn, Aug. 1, 1853.**—This mine is situated in the parish of Newlyn, and adjoining the celebrated East Wheal Rose to the north of west, and to the south-east of the Old Shepherds Mine. There are several large lodes traversing this sett. The first lode is driven north-west from East Wheal Rose 75 fms. This lode is 2 ft. wide, containing good stones of rich silver-lead ore, munda, and soft spar. The second lode is Penhallow Moor lode, 5 ft. wide, running north of west, and south of east, composed of gossan, flooken, munda, soft spar, and lead; and it is our opinion this lode will be a very productive one. We would recommend this lode to be wrought on with all speed under the adit. There are several other lodes which run through this sett that have been opened upon, and all containing lead ore and a beautiful gossan, and in a beautiful channel of clear ground. This channel of ground has proved very productive in East Wheal Rose for lead, and also in the Old Shepherds Mine, which is adjoining this mine. This sett is one mile in length from east to west, and about the same north and south. We have no hesitation in saying that this mine is one of the best speculations in this neighbourhood for making a good and a lasting mine for the adventurers.

**JOHN PHILLIPS.**

**SAMUEL LAWREY.**

**FORM OF APPLICATION FOR SHARES.**

To the Directors of the West Carroll Silver-Lead Mining Company.

GENTLEMEN,—I request you to allot me shares in the West Carroll Silver-Lead Mining Company, and I hereby agree to accept the same, or any portion of that number which you may allot to me, and to pay for the same when required.

Name in full length \_\_\_\_\_

Address \_\_\_\_\_

Reference \_\_\_\_\_

Date \_\_\_\_\_

Profession or business \_\_\_\_\_

Signature \_\_\_\_\_

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## THE STEAM-JET.

SEN.—Mr. Joshua Richardson, in your last Journal, seems to have arrived very hastily at certain conclusions. First, that the question of the superiority of the steam-jet over the furnace power of ventilation was set at rest in favour of the latter. Secondly, that my recent letter in your Journal on that subject unnecessarily revived the question, and has brought down upon my head the heavy club of official authority—ergo, the letter of Mr. Dunn, the Mine Inspector. I am astonished that Mr. Richardson should decry hearsay evidence, by stating that I elude to the hearsay statement of Professor Phillips, whilst he himself derives all his information from such evidence. I tell Mr. Richardson briefly that I went to examine the pit for myself, and that I have better means of judging of the matter than him. With regard to the question being set at rest in the way Mr. Richardson alludes to, why the committee have not yet made their report, neither condemning the jet or otherwise; and until that report is made it behoves us to withhold our judgements on so important a matter.

temperature, and sometimes, likewise, toughness when cold, I do not consider that manganese in any way improves steel; on the contrary, there are one or two marks of Swedish iron which are not improved by Heath's process. And there are, on the other hand, qualities of iron which, though containing much manganese, afford inferior cast-steel, often very red-short, and yet the use of carburet of manganese, by Heath's process, will remove this red shortness from iron already saturated with manganese. But the fact, that the patent process renders steel extensible and sound and readily workable which, without that process, would dissipate like hot sand, or crack to pieces under the hammer, is sufficient to class it as the greatest discovery ever made in the art of making cast-steel. The next in importance being the discovery of the late David Mushet—that carbon would unite with bar-iron in the melting-pot to form cast-steel: this process is everywhere in use in Sheffield, and next, after Heath's, it is the grand agent in facilitating the operations of the melters.

Mr. D. Mushet is also quite in error when he supposes that cast-steel, welding with the facility of bar-iron, can be produced from bar-iron, however low the quality. There is no steel whatever produced in Sheffield as cast-steel, even with the use of Mr. Heath's process, which welds with any such facility; and cast-steel thus made, from most of the ordinary kinds of bar-iron, will not bear a sufficient heat to admit of its being drawn into form from the ingot, far less will it weld. The true extent of Mr. Heath's patent may be gathered from the following remarks:—Previously to Mr. Heath's discovery, the manufacture of cast-steel was restricted to certain kinds of bar-iron, which, when they had been converted into blister-steel, and subsequently melted and run into ingots, afforded an ingot which, when heated and put under the hammer, could, at *some heat*, be drawn into solid continuous bars of steel; and there were a few qualities of Swedish iron which in this way afforded, when the blister-steel was lightly converted, bars of cast-steel which, *with caution*, could be welded like shear steel. There were other qualities or marks of Swedish iron which afforded ingots capable of being drawn into bars at a low heat, but which bars could not be welded without the aid of borax, at a low temperature. The majority, however, of the Swedish iron, when melted, afforded ingots, which could not, at any temperature, be extended into bars, possessing solidity and continuity; and as to making cast-steel, so as to stand the hammer, from any common coke or charcoal iron, it was to every steel-maker in Sheffield an impossibility. But when the shameless agent betrayed his master's confidence, and for the sake of *gain* placed his own name on record for the contempt of every honest mind that has cognizance of the base vendor and baser purchasers of stolen merit, the impossibility vanished. Common Swede iron, at 14*l.* per ton, was found to afford, with the stolen process, cast-steel which would weld equally well with shear steel, and the commonest charcoal irons, and many of the best kinds of coke iron, yielded cast-steel, which would bear readily the hammer, and endure as much heat in working as cast-steel is usually required to stand. Thus, for 19 out of 20 purposes the cast-steel maker found that he could make better steel out of iron at 16*l.* per ton than previously out of that at 36*l.*, whilst 1000 uses to which cast-steel never previously could have been applied, created an enormous and increasing demand.

Sept. 19. — A TAKER OUT.

More than 14 years have elapsed—the inventor is no more—and to his widow has been denied the slightest compensation for the improvement which has benefited this nation to the extent of millions, and which put annually into the pockets of the steel trade of Sheffield more than 300,000*l.* They cannot deny this. Take from them this magic dose of carbon and manganese (their *physic*, as they termed it), and their occupation is gone. Half Sheffield would figure in the *Gazette* under such a deprivation. They are at this moment, and will be, and I trust that history may record the fact, existing in utter helpless abject dependence upon the stolen invention of the late Josiah Marshall Heath, whose widow appeals in vain to the Legislature for justice. I am a steel-maker, and I deny that cast-steel was ever made, with the addition of carbon and manganese, or carburet of manganese, previously to Mr. Heath's invention, and I confidently assert that no cast-steel maker can now carry on his business to profit without the aid of carburet of manganese. The old melting-pots will bear witness to the former assertion, for where in them shall we find the deep indented rim which is always found in every pot where carburet of manganese has been used, but was never seen before Mr. Heath's invention. The steel-pen steel makers would persuade us that they make the sheet steel for this purpose from the first mark of Swedish iron. Those who have been amongst their casters, in their workshops, know that the common English iron, by the aid of Heath's invention, affords this steel. Pit-saws, and other saws, are reduced in cost 75 per cent. by the aid of the same invention, and other articles in proportion; in fact, this very invention enables the cast-steel makers to produce from 12,000 to 15,000 tons of cast-steel, from *first marks*, annually, though not more than 3000 are imported, and not one-sixth of the 3000 tons ever finds its way to the melting-pot. In fact, Heath's patent enables the manufacturer to sell nearly all the first marks as shear and blister-steel, and yet make 10 times as much cast-steel from first marks as formerly, a remarkable paradox, which the intrinsic merits of Heath's patent have justified.

Copper .....	17½ per cent.	} From gossan spotted with ore.
Silver .....	74 ozs. 13 dwts. 8 grs.	

Some stones of ore. 120 ozs. of silver to the ton.

Beyond conferring toughness and extensibility at an ordinary workin

...and the Commission, as an ordinary worker,

But, says Mr. Richardson, look at Mr. Dunn's official visit, whose figures completely invalidate that of Mr. Jude. Why, now let us calmly examine this official authority. First, four Inspectors declare that the amount of the current of air is 52,664 cubic feet per minute. Secondly, one Inspector makes it 66,163 cubic feet per minute. Professor Phillips, who was another official authority, and who did not take his statement from hearsay, but from examination (I wish Mr. Richardson would read for himself, rather than misquote official statements), made the amount to be nearly 60,000 cubic feet. Now, which of these official statements is correct? Indeed, putting aside that of Professor Phillips, which are we to take—the examination by the four Inspectors, or that by Mr. Dunn alone? If we find that nearly 60,000 cubic feet per minute is obtained by the one Inspector only, that given by the four, we may not conclude that "the more the merrier" is the motto. Now state, Mr. Dunn, what the amount given by Mr. Dunn is about 50 per cent. nearer Professor Phillips's statement than the amount given by the four Inspectors. Let them go on. Time is the great leveller. Next visit we shall have it quite up to the mark.

But there is Cramlington, with an ordinary furnace, has upward of 80,000 cubic feet per minute. Who says so? Mr. Potter. But this is hearsay evidence; is it not? Mr. Richardson? Mr. Potter, it appears, is the only authority in this case. Why did not the Inspector experiment with Cramlington as with Delaval? I know the reason why. As regards the statement that Cramlington is better ventilated than Delaval, I shall offer some proofs to the contrary. At the coroner's inquest, lately held at Cramlington, on the bodies of the men who were killed by the explosion of fire-damp, it came out in evidence that the gas frequently had to be driven out of the working places by the men's jackets. That a few days previous to the explosion an alarm was spread amongst the men that there was a large body of gas in the main air course, and that the workmen refused to work until it was removed. That neither the head westman nor the under westman knew how much air travelled the said ways. That there was no barometer in the pit. That no daily register of the amount of air going into the pit was kept. That neither the head nor the under westman knew the amount of air exhausted by the ventilation. That even the Inspector was refused to be examined, although requested by some of the workmen to be done. That on the same evening a large body of the workmen met, and agreed a resolution that a notice be sent to the head viewer, representing the bad state of the ventilation in the Shank House Pit, a part of the colliery known by that name. Again, as a further proof, a short time previous to the last explosion, there was a man burnt to death by an explosion of gas, he being an engineman for an underground engine. All these, and other proofs, suffice to show the state of the ventilation at Cramlington.

The mining public desire to be unequivocally informed which is the most powerful and economical machine for reducing their ore to powder. There is one of my engines at the Spitty Works in daily operation. I have there open to a 12 hours' trial before any committee in the world; and am convinced that the manager of the works, Mr. Alfred Trueman, will be happy to afford every assistance in his power to enable these gentlemen to arrive at a clear and sound result. Will my competitors offer like facility, as public and as impartial? Let them do so, and in stating the quantity of ore which they can crush in a given space of time, let them in future also state the price of their several engines for effecting this object. I am informed (and if I am wrong the gentleman referred to will correct me) that Cochran's machine is capable of crushing 30 tons in a day of 12 hours; the pieces operated upon being originally as big as a man's fist, or thereabouts, and that the cost of his machine is 2000*l*. Steam-stamps will crush from 30 to 40 tons in the 12 hours, and only cost 160*l*, royalty included. Besides which, it will crush blocks of ore *of the original size of which is upwards of a cubic foot!* I pause for a reply.

London, Sept. 22. \_\_\_\_\_ ISMAH BAGGS.

**METCALFE MINING COMPANY OF JAMAICA**

Sir,—It is as obviously the duty of the shareholders in this important company to require information from the board as it is the duty of the board to afford it to the shareholders; and I have no doubt that these mutual duties will now be satisfactorily performed. With this view I have abstained, and shall abstain, from public communicating details. It would be out of season, when there is a proper opportunity for communication, to make facts notorious which, however generally interesting in their nature, are not of sufficient importance to be made so. In the first instance, so far as privacy can attach to a public company, the private property of the shareholders who have contributed the funds for their collection. I cannot doubt but that all which has been amiss will be amended when the board is decisively informed upon its errors, or more correctly those of some of its members. The promptness and conscientious energy of the superintendent may even in itself have been the cause of some mistakes at home, by depriving the board of the advice it was entitled to; but this, and the very short time being which he has been at the same management. Far different from the lagging efforts of ordinary managers, who as soon as the money is subscribed take their time in considering what they shall next do, the superintendent had formed the company, completely digested its plans, and departed for the scene of operations within three weeks of the first public advertisement. Valuable as this promptness was to the public, it appears to have been some disadvantage to the board. They lost their councillor; and most possibly were ignorant of all the changes which were going on, and were unable to instruct members in his plans, which led in some degree to conduct inconsistent with the plans, and the selection, unaided by his advice, of incompetent persons to follow him dressed in brief and inconsistent authority, who did not know themselves, nor anything proper to be known on the subject in hand, proving, as such persons always do, the greatest hindrance, instead of an assistance, to the efforts of their principals. It even had Mr. Hopkins delayed a few weeks in England to see all appointments completed, and all necessary arrangements made, the business of the colony of business, fallacious changes might even then have been subsequently made. The extreme novelty of the undertaking to common people would hardly have rendered it possible that every person, after being subjected to the voyage, would realise exactly what was expected of him. Unless there is a good deal of ballast, these gold mines seem to turn minds upside down; indeed, it actually did occur that, during the voyage, some part of the establishment, something transpired which made it necessary to discontinue the voyage, and to return to England. It is probable that, even had Mr. Hopkins stayed a few weeks to play the schoolmaster at home, instead of going abroad to his business, some misadventures might have taken effect. Persons without an experience derived from opportunity are most easily obtained, and the most easily led away in posts of trial; and the reports which they are directed to make cannot immediately, where such a distance intervenes, be corrected at home. From such a character of mind, no doubt the reports proceeded, that the board had been deceived, and that the funds had been expended in purchase of gold at his command; whereas it was a notorious fact that they knew the proceedings of the board that he could not possibly have any at his command. But this false statement could not be corrected until the published reports reached the colony, which, thanks to wretched mail arrangements, was not very soon, and then a considerable period afterwards was necessarily consumed in bringing the correction home; so that in consequence the company has lost the very large revenue which it might otherwise have obtained, and which it is now endeavouring to recover. The board had no power over space to correct this vital error in time, it shows what great caution ought to be exercised at home in issuing instructions which it is so slow and so difficult to correct; and the shareholders may have reason to be surprised that the management here should not have been satisfied to "well alone," but should actually after Mr. Hopkins's departure upon faith pledge themselves to "circulating as to" engage other persons to carry on the undertaking who were totally unqualified, and to whom the power and the funds of the company were entrusted."

At the Garsfield Colliery, in the county of Durham, the Inspector of that district has discovered, on the complaints of the workmen about the bad ventilation, that there was no furnace in the colliery. That in a certain state of the weather and the pit could not be worked at all. What a disgrace to this important industry! The miner is being looked up to as an example to the other parts of the kingdom, to find a remedy without any artificial means of ventilation, and the workmen so often take that the overman, or some such official, keeps a bottle of physic ready to give the miner a daily dose as they pass out of the pit. The magistrates of the county have had the same complaint several times; and although the Inspector has suggested a lamp instead of a furnace, the amount of air, as stated before the bench, was 2000 cubic feet per minute.



competent, economical, and efficient conductors. I shall have pleasure in making the solid prospects of this company understood, on their real basis, totally disconnected with those flashy and feverish vicissitudes of temperature under which the ordinary conceptions rise and fall.—*DAVID MESSER: Sept. 14.*

### PORT PHILIP AND COLONIAL GOLD COMPANY.

A.—As the chief object in the formation of the above company appears to be so little understood and appreciated, the insertion of the following letter (taken from the *Melbourne Argus*) in your valuable Journal, may, perhaps, remove some portion of the mystification which has so long unduly depreciated the company's property in public estimation and market value—a letter which, coupled with the very encouraging advice since received in England, should suffice to satisfy the most sceptical of the shareholders that they have embarked their capital in a sound, and eventually a highly remunerative undertaking; but, unfortunately, so far as gold companies are concerned, talkers are preferred to doers—a fact hitherto painfully illustrated by the scale of prices in your Share List. "Show and sure" is a safe maxim to follow; and I commend Mr. Hopkins for his silence, until in a position to show what active energy and perseverance could do, and has done, under most trying difficulties, and that considerably within one year of his first setting foot on Australian ground,—but let the letter tell its own tale.—*Melbourn, Sept. 21.* *JEWITTA.*

### PORT PHILIP AND COLONIAL GOLD COMPANY.

SIR.—The variation in the quality of the samples smelted in our establishment last week did not exceed 2s. per ounce. Some of them were under 25 carats, although they were clean, and what I consider fair samples from the Mount. We are able to reduce gold dust into ingots with the ordinary charcoal from 12,000 to 20,000 ozs. per diem; a quantity far exceeding the requirements of this colony. I beg leave to remove the impression of my being the company's assayer, as stated in Mr. Paterson's *Gold Circular*. It is true that I am obliged to melt and assay for a short time, to train our staff to the business in this department; but my mission to this country is of a much more important and comprehensive character. I came here to establish the company's operations throughout, and to examine the metallic and mineral productions of the colonies, with a view to their development, should the prospects and conditions be found such as to warrant their being worked on an extensive scale. Although my time is now short, I hope to effect the object, and to furnish you with a copy of my geological report before I return to England.

*Melbourne, April 18.*

*EVAN HOPKINS.*

### GREAT CRINNIS COPPER MINE.

SIR.—Knowing you are at all times anxious for the best information you can obtain, I beg to submit a few brief remarks respecting this mine. Having had occasion to visit Cornwall within the last month, and being a shareholder in Great Crinnis, I am anxious to visit the mine, and satisfy myself with reference to the property, and likewise to see that operations were being carried on to develop its resources in the most speedy manner. On entering the mine, I was gratified to see such a quantity of work executed in so short a time—a large and powerful steam pumping engine, erected under the superintendence of Messrs. Hocking and Loam, fixed in such a position as to command the deepest levels, and easy of access for communicating with any other part, if required. The apparatus erected for communicating with the various shafts, in order to develop the mine, is sufficient to show to all parties concerned that the managing agents are not waiting in diligence to carry out the best interests of the proprietors.

Accompanied by the agent, I was shown the extent of the sett. One either side of our ground is some very valuable mining property, which led me to conclude that the Great Crinnis Copper Mine has been by no means flattered in the prospectus issued, as many others have been. Whilst standing near one of the shafts, to examine the nature of the strata, from which so much mineral had been extracted in the last working, I was much pleased to see some rich stones of copper ores drawn up, which I soon learned were taken from the new branch mentioned in Capt. Webb's report of the 15th Aug. I am sorry to find that I have seen, and from information I obtained, that this mine, after the necessary time has been spent in securing the shafts to form a communication with each other, will soon rank amongst the diamond-mining mines, and a property in which capitalists may find a secure investment.

I am in no way connected with the committee or agents, beyond the claim my right of the property will entitle me to, but I cannot in justice close my remarks without saying that great praise is due to the managers for making the best use of the time; also, having some practical knowledge of the value of mining materials, and looking over the cost-book at 2s. 6d. per ton, since my return to London, I have no hesitation in stating that they have also made the best use of the money expended.

*Exeter, Sept. 21.*

*A SHAREHOLDER.*

### THE CLIVE MINE—ITS WORKING MANAGEMENT.

SIR.—On perusing your Journal of the 27th Aug., my attention has been called to a report inserted therein from Capt. F. Rogers, and meeting at Clive Mine, 10th Aug., the contents of which nearly touching the good name of a respected friend of mine, now departed this life, and my own, I must beg you will insert the following in a review. Without stopping at present to contradict Capt. Rogers's opinions respecting the advantage or disadvantage of erecting a steam-crusher at the Clive Mine (although I have good reasons for so doing, and will express them if necessary), I will at once pass to those points immediately touching my friend and self. Capt. Rogers says in his letter, "I am sorry to tell you that the mine has been badly managed, inasmuch as to throw discredit on every one who inspects it." In saying this, he attacks the credit of my very good and now lamented friend, Capt. Matthew Curry, who monthly inspected the mine, on behalf of Thomas Field, Esq., up to Nov., 1852. Capt. Rogers should consider well before he attacks, or makes any assertion calculated to injure the good name of a professional companion, and particularly one who no longer remains in this world to answer for himself; however, I have no doubt that from among Capt. Curry's numerous circle of friends (naming mine) some one, aware of the facts, will take upon himself to oppose any attempt to injure his reputation; and should I be mistaken, let Capt. Rogers state his reasons for expressing the opinion he has, and I will take upon myself to refute any arguments he may advance to sustain it. In further asserting, "when I was here 14 months ago, there was some good ore lying in different parts of the mine; since that time it has been turned and mixed with rubbish to such extent that it will not now pay the cost of dressing." Capt. Rogers has been, to say the least, very inconsiderate; the good ore would be alluded to having been duly crushed and dressed, and no doubt forms part of the tons of lead ore he states as being fit for market, and commenced carrying to Newport on the morning of the 10th of his letter. In this last part of his letter Capt. Rogers casts a slur upon myself, I being managing agent at the mine at the period he alludes to. I must really beg that, in any future statements he may make, he will confine himself to facts he may be in possession of, and not write merely from supposition.—*THOMAS FAULT: The New Liners Mines, Llanvres, Sept. 1.*

### CARBERRY WEST MINING COMPANY—RULES AND REGULATIONS.

SIR.—The letter which appeared in your last week's Journal, headed "Irish Mining Companies," and signed "Saul Derf," will, I trust, act as a stimulant to the shareholders in the Carberry West Mining Company of Ireland, to insist upon a clearance of the mystery under which that company is at present clouded. I am well acquainted with the mine in question, having visited it within the last month, and have no hesitation in stating, from the reports I have received from the best mining authorities on the spot, and my own observations, that if efficiently worked, it will, I have no doubt, prove a remunerative speculation for the adventurers. The first step to be taken in discharging this duty, a general meeting of the shareholders, is for the shareholders to make themselves acquainted with the rules under which the company is conducted, and insist upon their being acted upon; to enable them to do this, I have obtained a copy of these rules, which I enclose to you, the entire, or any portion of which you may publish with this letter, so that the shareholders may be put in possession of them through your widely-circulated Journal.

I beg, now, to recommend to my fellow-shareholders to attend at the office of the company, Adelaide Chambers, Gracechurch-street, on Monday, 3d October, at 12 o'clock, when day, agreeable to the 2nd rule, a general meeting of the shareholders of the company is appointed to be held, and there then to insist upon a full and searching examination of the accounts from the commencement—viz. July, 1852, and at the same time to take such steps as they may deem requisite for the future management of the mines. It now rests with the shareholders, and with them alone, whether the West Carberry Mining Company of Ireland is to sink or swim. The mine is a good one, ample capital to work it has been subscribed, and it only requires energetic measures as to the management of it to be adopted, to make it a first-class dividend-paying mine.—*A SHAREHOLDER: London, Sept. 15.*

### RULES AND REGULATIONS OF THE CARBERRY WEST MINING COMPANY OF IRELAND.

1. The several persons whose names are for the time being entered as shareholders in the Cost-book shall be partners or shareholders in a mining company, formed or established for the purpose of opening and working mines upon or under certain lands, known by the name of Bousalough, in the county of Cork, Ireland, during the term of 31 years, granted or intended to be granted, by a lease from the owner of the said lands and mines, and for converting, manufacturing, selling, and disposing of the produce of such mines.
2. That the name and style of the said company shall be—The Carberry West Mining Company of Ireland (Bousalough, county of Cork) grey and purple silver copper mines.
3. That the place of business of the said company shall be at the works at Goleen, in the county of Cork, and at the offices of the company, Adelaide Chambers, Gracechurch-street, in the City of London, or at such other place as for the time being may be the office of the said company in England.
4. That the capital of the said company shall be 15,000*l.*, which shall be divided into 30,000 shares, of 10*s.* each, of which 8000 shares shall be assigned to St. Pierre Foley, Esq., and John Fieb, Esq., without any call or payment being made or required in respect thereof, as the consideration for the transfer made by them of the benefit of the agreement entered into by them for the lease of the mines; and that as to the remaining shares, the full amount of each share shall be paid on the allotment of such remaining shares respectively.
5. That the grant or lease of the said mines shall be a deed declaring that they hold the said mines under and by virtue of such lease, as trustees for the benefit of the shareholders in the said company, according to their respective shares and interests therein.
6. That the said company is formed, and the business thereof shall be conducted and carried on, on the Cost-book principle, subject nevertheless to such provisions as are herein contained.
7. That the first permanent appointment of purser and secretary of the said company shall be made by the managing committee, and that the purser and secretary shall be subject to the control of the managing committee and to the shareholders of the said company.
8. That a managing committee, consisting of six members, shall be appointed, and that the Hon. Denis Arthur Bingham, of Portland-street, London, and Newbrook-park, county of Mayo; the Hon. Luke Plunkett, of Chester-square, county of Middlesex; the O'Gorman Mahon, of Pall-mall; Charles Browne, of Rectory-lodge, Hanwell, in the county of Middlesex; Esq.; the Rev. Robert Knott, Clement's Inn; and William White, of Bow, Middlesex, Esq., shall be the present managing committee of the said company; and that the said Charles Browne shall be the chairman of the said committee. And that upon the said Charles Browne resigning his office of chairman, or ceasing to be a member of the managing committee, the committee for the time being shall choose a chairman in his place; and that the present members of the managing committee shall be the trustees of the said company. And that Messrs. Croxley and Burn, of Lombard-street, in the City of London, and McCarthy Downing, Esq., of Skibbereen, in Ireland, shall respectively be the attorneys and so-

licitors of the said company in England and Ireland respectively. And that the said St. Pierre Foley shall be the inspecting and consulting engineer of the said company.

9. That it shall be in the discretion of the present managing committee to increase their number to eight, by the addition of two persons, to be nominated by Alfred Croxley, the broker of the said company, and to be approved of by the present managing committee, or any three members thereof; such increase to be made on or before the first day of November, 1852; and such two additional committee-men shall have all the powers, and be subject in every respect to these rules, as if expressly appointed thereby; and if the present managing committee shall consider that only one new member shall be necessary, it shall be lawful to appoint one such new member only accordingly, under this rule.

12. That the managing committee shall meet once a month, or oftener, if they shall think proper, for the purpose of superintending the affairs and concerns of the said company, and of protecting their interests; and they shall have full power at any meeting or meetings to adopt any resolution they may think necessary for the benefit of the said company; and the purser and other officers of the said company shall be subject to their direction and control; and any three members of such managing committee shall be sufficient to transact the business thereof.

13. That the present managing committee shall remain in office until the ordinary meeting of the shareholders of the company, to be held in the month of July, in the year 1853; at such meeting the shareholders present personally, or by proxy, may either continue in office the before-mentioned managing committee, or any member of it, or may elect a fresh committee to supply the places of those not continued in office, the present members of the managing committee being eligible; and at the first ordinary meeting, to be held in the month of July in every year thereafter, the shareholders present personally, or by proxy, shall elect persons to supply the places of the members of the committee then retiring from office, agreeably to the provisions hereinafter contained—that is to say, at the end of the first year after the first meeting of the committee of management, two members thereof shall go out of office, to be determined amongst themselves at the end of the second year one half (or as near in number thereto as circumstances will admit) of the remaining number of the committee, to be determined in like manner, shall go out of office, and at the end of the third year the remainder of such committee shall go out of office, and in every instance the places of the retiring members shall be supplied by an equal number of shareholders; and at the first ordinary meeting, in the month of July in every subsequent year, one-third (or as near in number thereto as circumstances will admit) of the managing committee, being those who have been longest in office, shall go out of office, and their places shall be supplied in like manner; nevertheless, every member of the committee so retiring from office may be re-elected, and after such re-election shall, with reference to going out by rotation, be considered a new member of the committee.

17. That Charles Browne, Esq., the chairman of the said managing committee, shall be entitled to retain, out of the capital of the said company, the sum of *seventy-five guineas*, and that the Hon. Denis Arthur Bingham shall be entitled to retain, as *assessor*, the sum of *forty guineas*, and that the Hon. Luke Plunkett shall be entitled to retain, as *assessor*, the sum of *forty guineas*, such several sums being as for a remuneration for the trouble the said parties have severally been put to in establishing the said company, and the said several sums shall be retained and paid, as aforesaid, on the appointment of a sitting-day at the Stock Exchange, London; and that the members of the managing committee shall hereafter be entitled to retain out of the said company the sums following—that is to say, the chairman of the said committee shall be entitled to the sum of three guineas and one shilling out of the capital of the said company, and the said chairman shall be entitled to the sum of two guineas, and the other members of the said committee to the sum of one guinea each for every ordinary meeting; and the said several sums, being intended as a remuneration for trouble, the members of the said committee shall be entitled to them only in case they shall actually attend the meetings; and that the remuneration of the managing committee may be altered at any of the general meetings of the shareholders; and that the said managing committee shall be at liberty to pay any and all expenses of the capital of the said company all necessary and usual expenses attending the formation of the said company.

22. That a general meeting of all the shareholders of the company shall be held on the first Monday in the months of October, January, April, and July in every year, and that at every such meeting the purser shall produce the cost-book of the company, and a balance-sheet, or general statement, showing all his receipts and payments in respect of the said company, and the committee shall at the meeting present a report of the state and progress of the said company, and the chairman of the managing committee, or in his absence some one of the members of the managing committee, to be chosen by the meeting, or in the absence of the chairman and all the members of the committee, any shareholder to be chosen for that purpose by a majority of the votes of shareholders present at such meeting, shall be chairman of such meeting.

24. That any shareholder, or shareholders, whose shares shall amount to 1000 parts of the whole number of shares, shall have the power to require the managing committee to convene extraordinary general meetings of the shareholders, which shall be convened by a circular addressed and forthwith by post to the shareholders.

The claims on our space will not allow us to devote sufficient for the entire of the rules of the said company, which are unusually lengthy; but we have selected from them what we consider necessary to meet our correspondent's object.

### MINES IN IRELAND.

SIR.—Having seen many enquiries made during the last few weeks through your Journal, respecting Irish mines and their management, I beg to be allowed, through the same medium, to ask a few questions concerning the management of the Glensaulin and Carvilleen Mines.

1. Do the directors visit the mine, and how often?
2. Have the shareholders been called together since the formation of the company?
3. Do the directors consider that they are doing justice to the shareholders in entrusting the entire management of the mines, at surface and underground, to a young gentleman from London, who cannot be supposed to know anything about it, and who, moreover, resides 30 miles from the scene of operations?

*A SHAREHOLDER: London, Sept. 20.*

### IRISH MINING COMPANIES.

SIR.—My former letter, complaining that there had been no meetings called of the South Cork, Mizen Head, and Royal Hibernian Copper Companies, has elicited various communications from parties interested in one or all of these concerns. That of Mr. St. Pierre Foley was courteous and gentlemanly. His professional description of the South Cork Company was highly satisfactory; and I agree with a more recent writer in your Journal, that Mr. St. Pierre, the secretary, is most capable, and always ready to do his duty. The next sentence took my appetite away. We were there told by this "Sec.," and was "emphatically affirmed" by him, "that the paid-up capital did not exceed 4500*l.*, of which 3000*l.* was paid in cash for the mineral property." "Emphatic" enough, with a vengeance. Here I, one who paid up my money "like a prince," am informed, for the first time, that only 4500*l.* were paid up. Why was I not made acquainted with this important "fact" before? 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CRAIGWEN (NARAK DINAS).—In No. 1 adit, this week, the furnace drive for the porphyry into the clay-slate the better is the appearance of the lode; the part we are now driving upon is 2 ft. wide, composed of kilas, carbonate of lime, blende and silver-lead ore, yielding of the latter fully  $\frac{1}{2}$  ton per dz. I have no doubt that this lode will yield well when we pass the lower and get the other wall, which is not far off. The lode in the lower adit is fast improving as we drive into it; it is about 4 ft. wide, composed of kilas, carbonate of lime, blende, lead ore, yielding  $\frac{1}{2}$  ton per dz. (m. and var. rich in silver).



competent, economical, and efficient conductors. I shall have pleasure in making the solid prospects of this company understood, on their real basis, totally disconnected with those flashy and feverish vicissitudes of temperature under which the ordinary conceptions rise and fall.—**DAVID MURPHY: Sept. 14.**

#### PORT PHILIP AND COLONIAL GOLD COMPANY.

Sir,—As the chief object in the formation of the above company appears to be so little understood and appreciated, the insertion of the following letter (taken from the *Melbourne Argus*) in your valuable Journal, may, perhaps, remove some portion of the mystification which has so long unduly depreciated the company's property in public estimation and market value—a letter which, coupled with the very encouraging advice since received in England, should suffice to satisfy the most sceptical of the shareholders that they have embarked their capital in a sound, and eventually a highly remunerative undertaking; but, unfortunately, so far as gold companies are concerned, talkers are preferred to doers—a fact hitherto painfully illustrated by the scale of prices in your Share List. "Slow and sure" is a safe maxim to follow; and I commend Mr. Hopkins for his advice, until in a position to show what active energy and perseverance could do, and has done, under most trying difficulties, and that considerably within one year of his first setting foot on Australian ground,—but let the letter tell its own tale.—**Melbourn, Sept. 21.**

#### PORT PHILIP AND COLONIAL GOLD COMPANY.

Sir,—The variation in the quality of the samples melted in our establishment last week did not exceed 25 per cent. Some of them were under 23 carats, although they were clean, and what I consider fair samples from the Mount. We are able to reduce gold dust into ingots with the ordinary charcoal from 12,000 to 20,000 ozs. per ton; a quantity far exceeding the requirements of this colony. I beg leave to remove the impression of my being the company's assayer, as stated in Mr. Patterson's *Gold Circular*. It is true that I am obliged to melt and assay for a short time, to train our staff to the business in this department; but my mission to this country is of a much more important and comprehensive character. I came here to establish the company's operations throughout, and to examine the metallic and mineral productions of the colonies, with a view to their development, should the prospects and conditions be found such as to warrant their being worked on an extensive scale. Although my time is now but short, I hope to effect the object, and to furnish you with a copy of a geological report before I return to England.

*Melbourne, April 18.*

**EVAN HOPKINS.**

#### GREAT CRINNIS COPPER MINE.

Sir,—Knowing you are at all times anxious for the best information you can obtain, I beg to submit a few brief remarks respecting this mine. Having had occasion to visit Crinnis within the last month, and being a shareholder in Great Crinnis, I felt anxious to visit the mine, and satisfy myself with reference to the property, and likewise to see that operations were being carried on to develop its resources in the most speedy manner. On entering the mine, I was gratified to see such a quantity of work executed in so short a time—a large and powerful steam pumping engine, erected under the superintendence of Messrs. Hocking and Loam, fixed in such a position as to command the deepest levels, and easy of access for communicating with any other part, if required. The apparatus erected for communicating with the various shafts, in order to develop the mine, is sufficient to show to all parties concerned that the managing agents are not wanting in diligence to carry out the best interests of the proprietors.

Accompanied by the agent, I was shown the extent of the sett. One either side of the Great Crinnis is some very valuable mining property, which led me to conclude that the Great Crinnis Copper Mine has been by no means flattered in the prospectus issued, as many others have been. Whilst standing near one of the shafts, to examine the nature of the strata, from which so much mineral wealth has been extracted in the last working, I was much pleased to see some rich streaks of copper ore, and upon the 15th Aug. I am of opinion from what I have seen, and from information I obtained, that this mine, after the necessary time has been spent in securing the shafts to form a communication with each other, will soon rank amongst the dividend-paying mines, and a property in which capitalists may find a secure investment.

And, in no way, with the committee or agents, beyond the claim my right of the property will entitle me to, but I cannot but justly close my remarks without saying that great praise is due to the managers for making the best use of the time, also, having some practical knowledge of the value of mining materials, and looking over the cost-book at 25, Austinfrans, since my return to London, I have no hesitation in stating that they have also made the best use of the money expended.

*Ago, Sept. 21.*

**A SHAREHOLDER.**

#### THE CLIVE MINE—ITS WORKING MANAGEMENT.

Sir,—On perusing your Journal of the 27th Aug., my attention has been called to a report inserted therein as from Capt. E. Rogers, and dated at "Clive Mine," 19th Aug., the contents of which nearly touching the good name of a respected friend of mine, now deceased, and of my own, I must beg you will insert the following in a review. Without attempting to present to contradict Capt. Rogers's opinions respecting the advantage or disadvantage of a steam-crusher at the Clive Mine (although I have good reasons for so doing, and will express them if necessary), I will at once pass to those points immediately touching my friend and self. Capt. Rogers says in his letter, "I am sorry to tell you that the mine has been badly managed, inasmuch as to throw discredit on every one who inspected it." In saying this, he attacks the credit of my very good and now lamented friend, Capt. Matthew Curry, who, I might inspect the mine, on behalf of Thomas Field, Esq., up to Nov., 1852. Capt. Rogers says, "I consider well before he attacks, or makes any assertion calculated to injure the good name of a professional companion, and particularly one who no longer remains in this world to answer for himself, I have no doubt that from among Capt. Curry's numerous circle of friends (mining men) some one, aware of the facts, will take upon himself to oppose any attempt to injure his reputation; and should I be mistaken, let Capt. Rogers state his reasons for expressing the opinion he has, and I will take upon myself to refute any arguments he may advance to sustain it." In further asserting, "when I was here 14 months ago, there was some good work lying in different parts of the mine; since that time it has been turned and mixed with rubbish, so that even the best of the mine, the good ore work, Capt. Rogers has been, to say the least, very inconsiderate; the good ore work he alludes to having been duly crushed and dressed, and no doubt forms part of the 15 tons of lead ore he states as being fit for market, and commenced carrying to Newport on the morning of the date of his letter. In this last part of his letter, Capt. Rogers casts a slur upon myself, I being managing agent at the mine at the period he alludes to. I must really beg that, in any future statements he may make, he will confine himself to facts he may be in possession of, and not write merely from supposition.—**THOMAS FAULL: The New Limerick Mines, Limerick, Sept. 7.**

#### CARBERRY WEST MINING COMPANY—RULES AND REGULATIONS.

Sir,—The letter which appeared in your last week's Journal, headed "Irish Mining Companies," and signed "Saul Derf," will, I trust, act as a stimulant to the shareholders in the Carberry West Mining Company of Ireland, to insist upon a clearance of the mystery under which that company is at present clouded. I am well acquainted with the mine in question, having visited it within the last month, and have no hesitation in stating, from the reports I have received from the best mining authorities on the spot, and my own observations, that if efficiently worked, it will, I have no doubt, prove a most remunerative speculation for the adventurers. The first step to be taken to disentangle this adventure from its present ambiguous position, is for the shareholders to make themselves acquainted with the rules under which the company is conducted, and insist upon their being acted upon; to enable them to do this, I have obtained a copy of these rules, which I enclose to you, the entire, or as much of them as you may wish to publish in this letter, so that the shareholders may be put in possession of them through your widely-circulated Journal.

I beg, now, to recommend to my fellow-shareholders to attend at the office of the company, Adelaide Chambers, Gracechurch-street, on Monday, 3d October, at 12 o'clock, on which day, agreeable to the 22d rule, a general meeting of the shareholders of the company is appointed to be held, and there and then to insist upon a full and searching examination of the accounts from the commencement—viz. July, 1852, and at the same time to take such steps as they may deem requisite for the future management of the mine. It now rests with the shareholders, and with them alone, whether the West Carberry Mining Company of Ireland is to sink or swim. The mine is a good one, ample capital to work it has been subscribed, and it only requires energetic measures as to the management of it to be adopted, to make it a first-class dividend-paying mine.—**A SHAREHOLDER: London, Sept. 15.**

#### RULES AND REGULATIONS OF THE CARBERRY WEST MINING COMPANY OF IRELAND.

1. The several persons whose names are for the time being entered as shareholders in the Cost-book shall be partners or shareholders in a mining company, formed or established for the purpose of opening and working mines upon or under certain lands, known by the name of Boulaslough, in the county of Cork, Ireland, during the term of 31 years, granted or intended to be granted, by a lease from the owner of the said lands and mines, and for converting, manufacturing, selling, and disposing of the produce of such mines.
2. That the name or style of the said company shall be—The Carberry West Mining Company of Ireland (Boulaslough, county of Cork) grey and purple silver copper mines.
3. That the place of business of the said company shall be at the works at Goleen, in the county of Cork, and at the office of the company, Adelaide Chambers, Gracechurch-street, in the City of London, or at such other place as for the time being may be the office of the said company in England.
4. That the capital of the said company shall be 15,000*l.*, which shall be divided into 30,000 shares, of 10*s.* each, of which 9000 shares shall be assigned to St. Pierre Foley, Esq., and John Fish, Esq., without any call or payment being made or required in respect thereof, as the consideration for the transfer made by them of the benefit of the agreement entered into by them for the lease of the mines; and that as to the remaining shares the full amount of each share shall be paid on the allotment of such remaining shares respectively.
5. That the grant or lease of the said mines shall be made to the managing committee, as trustees of the said company, who shall execute a deed declaring that they hold the said mines under and by virtue of such lease, as trustees for the benefit of the shareholders in the said company, according to their respective shares and interests therein.
6. That the said company is formed, and the business thereof shall be conducted and carried on, in the Cost-book principle, subject nevertheless to such provisions as are herein contained.
7. That the first permanent appointment of pursuer and secretary of the said company shall be made by the managing committee, and that the pursuer and secretary shall be subject to the control of the managing committee and to the shareholders of the said company.
8. That a managing committee, consisting of six members, shall be appointed, and that the Hon. Denis Arthur Bingham, of Portland-street, London, and Newbrook-park, county of Mayo; the Hon. Luke Plunkett, of Chester-square, county of Middlesex; the O'Gorman Mahon, of Pall-mall; Charles Browne, of Rectory-lodge, Hanwell, in the county of Middlesex, Esq.; the Rev. Robert Rowe Knott, of Clement's Inn; and William White, of Bow, Middlesex, Esq., shall be the present managing committee of the said company; and that the said Charles Browne shall be the chairman of the said committee. And that upon the said Charles Browne resigning his office of chairman, or ceasing to be a member of the managing committee, the committee for the time being shall choose a chairman in his place; and that the present members of the managing committee shall be the trustees of the said company. And that Messrs. Crowley and Burn, of Lombard-street, in the City of London, and McCaffrey Downing, Esq., of Skibbereen, in Ireland, shall respectively be the attorneys and so-

licitors of the said company in England and Ireland respectively. And that the said St. Pierre Foley shall be the inspecting and consulting engineer of the said company.

9. That it shall be in the discretion of the present managing committee to increase their number to eight, by the addition of two gentlemen, to be nominated by Alfred Crowley, the broker of the said company, and to be approved of by the present managing committee, or any three members thereof; such increase to be made on or before the first day of November, 1852; and such two additional gentlemen shall have all the powers, and be subject in every respect to these rules, as if expressly appointed thereby; and if the present managing committee shall consider that only one new member shall be necessary, it shall be lawful to appoint one such new member only accordingly, under this rule.

12. That the managing committee shall meet once a month, or oftener, if they shall think proper, for the purpose of superintending the affairs and concerns of the said company, and of protecting their interests; and they shall have full power at any meeting or meetings to adopt any resolution they may think necessary for the benefit of the said company; and the pursuer and other officers of the said company shall be subject to their direction and control; and any three members of such managing committee shall be sufficient to transact the business thereof.

13. That the present managing committee shall remain in office until the ordinary meeting of the shareholders of the company, to be held in the month of July, in the year 1853; or at such meeting the shareholders present personally, or by proxy, may either continue in office the before-mentioned managing committee, or any member of it, or may elect a fresh committee to supply the places of those not continued in office, the present members of the managing committee being eligible; and at the first ordinary meeting, to be held in the month of July in every year thereafter, the shareholders present personally, or by proxy, shall elect persons to supply the places of the members of the committee then retiring from office, agreeably to the provisions hereinafter contained—that is to say, at the end of the first year after the first election of the committee of management two members thereof shall go out of office, to be determined amongst themselves at the end of the second year; one half (or as near in number thereto as circumstances will admit) of the remaining number of the committee, to be determined in like manner, shall go out of office, and at the end of the third year the remainder of such committee shall go out of office, and in every instance the places of the retiring members shall be supplied by an equal number of shareholders; and at the first ordinary meeting, in the month of July in every subsequent year, one-third (or as near in number thereto as circumstances will admit) of the managing committee, being those who have been longest in office, shall go out of office, and their places shall be supplied in like manner; nevertheless, every member of the committee so retiring from office may be re-elected, and after such re-election shall, with reference to going out by rotation, be considered a new member of the committee.

17. That Charles Browne, Esq., the chairman of the said managing committee, shall be entitled to retain, out of the capital of the said company, the sum of seventy-five guineas, and that the Hon. Denis Arthur Bingham shall be entitled to retain, as aforesaid, the sum of twenty guineas, and that the Rev. Robert Rowe Knott shall be entitled to retain, as aforesaid, the sum of forty guineas; and that Wm. White, Esq., shall be entitled to retain, as aforesaid, the sum of forty guineas, such several sums being as and for a remuneration for the trouble the said parties have severally been put to in establishing the said company, and the said several sums being paid out of the capital of the said company, and the said sums shall be paid at the rate of a sitting-day at the Stock Exchange, London; and that the members of the managing committee shall hereafter be entitled to retain out of the said company the sums following—that is to say, the chairman of the said committee shall be entitled to the sum of three guineas each, and the other members of the said committee to the sum of two guineas each for every general or special meeting of shareholders; and the said chairman shall be entitled to the sum of two guineas, and the other members of the said committee to the sum of one guinea each for every other meeting; and the said several sums, being included as a remuneration for the trouble the said parties have severally been put to in establishing the said company, shall be paid out of the capital of the said company, and the said sums shall be paid at the rate of a sitting-day at the Stock Exchange, London; 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sketches which he has exhibited that day of their property, and of his kind offer to have the same framed, and presented to the company. Mr. B. Wood seconded Mr. Wilkinson's proposal.

Mr. WILKINSON then proposed that the thanks of the meeting be given to Mr. J. H. Rymer, the solicitor to the company, who was a considerable shareholder in the undertaking, and who, in common with the committee and the secretary, had taken no money from the capital of the company, but had invested their fees and salary in the purchase of shares in the company. Mr. MATTHEWS seconded the proposition.

Messrs. BACON, WATSON, and RYMER severally acknowledged the compliment.

Mr. THOMAS ROWLAND said they were greatly indebted to the several gentlemen who had given such satisfactory accounts of the proceedings of the company, and he felt the greatest confidence in the gentlemen who composed the committee of management. They had exercised the greatest economy with the funds of the company, and had also vigilantly watched the progress of the works. He moved—"That the best thanks of the meeting be given to the committee of management for their attention to the interests of the company," which was seconded by Mr. ALLEN, and passed unanimously.

The CHAIRMAN, on behalf of his brother directors, acknowledged the compliment in handsome terms.

Mr. WILKINSON said, before the business of the meeting concluded, he wished to observe that he visited the quarries several months since, and was highly pleased with the prospects of the same. He was perfectly satisfied that the undertaking would eventually pay 40 per cent. He must add his testimony to the value of the services of their manager. He was connected with various slate quarries in Wales, and he trusted that an honest man had been found, he should be justly rewarded; he should, therefore, propose that a sum of not less than 100, be awarded for the purchase of some suitable testimonial to Mr. Hume, and that the selection of the same be left to the discretion of the committee. This proposal was put to the meeting, and passed unanimously.

Mr. RYMER proposed a vote of thanks to the chairman for his courteous attention to his duties, which was seconded by Mr. BADEMECH.

The CHAIRMAN, in acknowledging the same, said he had always experienced great pleasure in rendering his humble services in the promotion of a common cause, in which they had all embarked. He had never been associated in any undertaking in which there was found a greater unanimity of feeling, and although he might have occasion to congratulate upon an improvement of their property, yet he felt sensible they could not improve the kind and cordial feeling which they had manifested towards him. He trusted that those events which now threatened to disturb the peace and tranquillity of Europe would be long satisfactorily set at rest, and that the dominant and aggressive power of Russia would make that concession to a subordinate power which Turkey justly demanded; but whatever might be the convulsions which agitated foreign nations, and however greatly they might restrict our commercial affairs, yet he trusted the peaceful pursuits of exploring the mineral treasures of this country would go on unconsciously, and that the enterprise in which they had more especially embarked would yield large and ample returns.

**THE WEST CARROLL SILVER-LEAD MINING COMPANY.**—A prospectus has just been issued, which appears in our advertising columns, by which it is proposed to divide the mine into 12,000 shares of 10s. each, of which 6000 only are to be put to the public, the remaining 6000 being retained by the original proprietors. The mine adjoins the celebrated East Wheel Rose, which has already paid in dividends 250s. on each 500, share. The principal lodes of this valuable mine pass through West Carroll, as also the leading lodes of Old Shepherds, North Shepherds, Wheel Constance, Penhallow Moor, Wheel Hawkins, &c. Capt. Champion, whose reputation is so well-known in Cornwall, is the captain of West Carroll. He has been connected with the Old Wheel Rose and East Wheel Rose adventures for upwards of 30 years; he is at the present time captain of the latter, and has been engaged in the West Carroll will prove as rich a dividend-paying mine as the East Wheel Rose. Capt. Champion, in reporting on the mine, says—"Knowing, as I do, all the lodes in this locality, I shall be happy to be your agent to work West Carroll, to which I presume your friends will not object, but, on the other hand, will rather wish it, when I tell them I took a license of East Wheel Rose precisely in the same way I have taken the license of West Carroll, and managed it some years before Old Wheel Rose was abandoned; and as the old Rose faded away I had the satisfaction of knowing that I was the only person who had found a better one. Whether it is a probability, or I fully anticipate, with the same perseverance, to lead this concern also to the same lasting and profitable result." There are several large lodes traversing the set; the first is driven north-west from East Wheel Rose 75 fms. 2 ft. wide, containing good stones of rich silver-lead ore, munda, and soft spar; the second is Penhallow Moor lode, 5 ft. wide. There are several other lodes which have been opened upon, all containing lead ore, and a beautiful gossan in a channel of clear ground.

**THE GYLLON LAND AND MINING COMPANY.**—The meeting announced to take place on Tuesday last has been further adjourned to Wednesday next, when Capt. Payne is expected to make some important disclosures with reference to the appropriation of the funds. There cannot be a doubt that the undertaking has been in the hands of the late directors, and that the company is in a state of liquidation. His confidence in the whole is entirely misplaced, and he, like the rest of the unfortunate shareholders, has been duped and defrauded. We referred last week to the respectability of the directors, and felt justified in expressing our approval of them. We have, however, since made further enquiry, and find that not only are some of the gentlemen whose names are mentioned amongst the directors in no way connected with the management, but that there are also the names of those who are now dead, and of others who are not in existence. The shareholders, therefore, owe it to themselves, as well as to the public, to prosecute a rigorous investigation into the whole matter, which is utterly impossible can any longer exist under an assumed title and assumed management.

**THE PONTAUBAUD SILVER-LEAD MINES, IN FRANCE.**—These mines, which are now working under the management of Messrs. John Taylor and Sons, are situated in the department of Trier, and are about five leagues from the town of Clamecourt. The sets are reported to be very extensive, comprising an area of 2,000 acres. The constitution of the new company is that of a *société anonyme*, authorized by Imperial Decree, with complete exemption to the shareholders from all liability. The entire amount of the capital has been paid up, and possession of the property was delivered to the new directors on the 1st June last. The new works are progressing most satisfactorily, under the superintendence of able and experienced Cornish captains and engineers. The late company, notwithstanding the imperfect manner in which their operations were conducted, obtained an amount of produce equal to about 100,000, sterling, of which three-fourths resulted from sales of silver, and one-fourth from lead. Parial, which is regarded as the most important mine in the concession, will not be attacked until the spring. Rozier is a mine of great promise, and has yielded a considerable quantity of lead ore, rich in silver, up to the present time; a group of very powerful and rich lodes have been worked in this mine. In the agent's weekly reports, lately received, mention was made of courses of ore in several of the lodes and winzes now in progress on the St. Marc lode. A very fine promising lode, 1 ft. wide, and running north, to a ton of rich silver-lead ore per fathom, has been discovered only 3 fms. below the surface. A new shaft, called the Caroline's, has been begun on a lode situated between the Filon St. Marc and the Filon St. George, which presents a very flattering appearance. At Miohe, Chaluset, and Combre, very strong and promising veins are to be seen in shallow workings. The quantity of ore raised in June was 85 tons; about 70 tons were raised in July. In August and the present month nearly all the force of the establishment has been engaged in the new works. One very valuable characteristic of these mines is the unusual proportion of silver in the ore, which produces an average 150 ozs. per ton of ore, and are worth about 300, per ton. The smelting works are admirably situated, and considerable progress has been made in the erection of furnaces. Other, and very extensive improvements, are in contemplation.

**MINING IN PENNSYLVANIA.**—Professor H. D. Rogers has recently inspected and reported on the extensive mines of Wheatley, Brookside, and Charlestown, situated at Phoenixville, Chester County. The Wheatley and Charlestown belong to a group of lead and copper-bearing lodes of a very interesting character, which form a metalliferous zone, ranging in a general east and west direction across the Schuylkill River, near the lower stretches of the Perkiomen and Pickering Creeks, in Montgomery and Chester counties, and bids fair at no distant day to become a most productive mineral region. The Wheatley vein runs about south 34° west, beginning at a point bearing near the creek in the red shale, but proving itself to be more productive in the soft sandstone, and then, in its course southwards, it has been traced for about 1200 ft. and surface fragments of its calcareous limestone indicate its range at least 1/2 of a mile farther. The vein varies in thickness from a few inches to about 2 1/2 ft., and its averages may be taken at about 18 in. The Brookside shaft, in August last, was down 110 ft. At the Wheatley Mine the shaft is down about 20 ft.; the 10 fm. level has been extended 72 ft.; the 20 fms. level, and the average yield is calculated to the square fathom is from 1 1/2 to 1 1/4 tons. Professor Rogers strongly recommends that the Brookside and Wheatley Companies should unite their resources for the construction of a very central shaft between the mines, for the erection of machinery capable to develop, drain, and work the lodes in levels not to be reached by the present machinery.

**MINING IN JAMAICA.**—A prospectus has recently been issued by the Clarendon Mining Company of Jamaica, formed for working an immense tract of mineral ground, the parishes of Clarendon and St. Dorothy, extending over an area of 20,000 acres, or 31 1/2 square miles. This property has been inspected and reported on by Mr. Drew, mining engineer, Mr. G. Netherole, mining and civil engineer, and Capt. Samuel Bennett, of Mount Vernon Mine. It appears throughout its entire extent it gives strong indications of rich lodes of copper. 10 distinct mines have already been opened, principally on the property of Mr. Thomas Thompson, who is in the direction, and who has also secured other mines on an advantageous term. The estates contained within the company's purchase are, Ludlow, Crofts, Rock River, Clarendon, Gold Mine, Keys, Stamford, Retreat, Moors, Danks, Mullet Hall, Mitchell's; all are traversed by hills and mountain ridges in various directions, with rivers, river courses, and their tributaries in the valleys. The strata at surface are most broken up and jumbled together by volcanic action, and partially decomposed by the action of the atmosphere; but this, on opening the lodes, they present a very definite character, and produce regular courses of grey oxides, and the blue and green carbonates of copper. The capital is £80,000, in 10 shares, and the directors have agreed with Mr. Thompson for the lease for 99 years of the whole of his own estate, including the use of all timber and other building materials, pasturage for horses and cattle employed on the mines, and the occupation of surface for necessary buildings and machinery, without charge for the same; also for the transfer to the company of all mining leases obtained from other parties, with all their privileges, in consideration of dues of 1/16th of the produce; and the allotment of 20,000 free shares, of which 2000 are to be reserved for the completion of the necessary conveyances to the trustees, 6000 as soon as the remaining 6000 have been received. A further sum of £10,000 has to be paid to Mr. Thompson, by the directors, for expenses in Jamaica, and where to 31st July, connected with the mines, and raising 50 tons of ore, now on its way to England, as the property of the company. The ore assayed in this country was produced from 10 to 50 per cent; and in such favour is this undertaking viewed here and there, that 70,000 shares have been applied for by influential parties, and in whom a portion will be allotted, and the entire number are ready to be taken up in England.

**HOLLOWAY'S PILLS, AN INFALLIBLE REMEDY FOR COUGHS, COLDS, AND BRONCHITIS.**—Mr. David Morris, a respectable farmer residing at Capel Celyn, near Llanelli, had been a sufferer for many years from chronic cough and asthma, for which he had tried remedies innumerable without obtaining the least alleviation. He was recommended by Mr. Hughes, druggist, Llanelli, to try Holloway's Pills, and this invaluable medicine has had such a wonderful effect on the disease, that he is now able to do his usual work on the farm. Sold by all druggists, and at Professor Holloway's establishment, 44, Strand, London.

## GOLD FIELDS, &amp;c., OF NORTH WALES.—No. III.

At the boundary north of the Prince of Wales Mines, as you ascend to the top of the mountain range, Moel Iapri, perhaps 150 fms. above the Roman's Mine works, on Hafod-y-Morfa, you meet old mine excavations, including several adit levels, shafts, and dressing-floors, bearing evident proofs that ores have been raised here to some amount. On examining these works, the mineral nature of the several lodes seen as you proceed shows proofs of large deposits of ores in this mountain; but, as far as can be seen at present, the ores near the surface are chiefly iron, arsenical, and copper pyrites; and those beneath silver, lead, and blende. From specimens of the lode ore that are scattered around the old floors, and that must have been taken from the bottoms of the old works, we may reasonably conclude that deposits may be found at depths of great value. Their richness in silver is very evident, and parts of the lodes attached, as well as the spar, chiefly quartz, but mixed with carbonate of lime, show such indications as warrant such a favourable conclusion. If the lodes dip to the north, or into the mountain, the property may be worked by the proprietor to some advantage, but at an expense of moment, owing to its height and other particulars, not necessary to be noted; but if to the south they fall into the adjoining property (Hafod-y-Morfa) in some fms., as the old works are very near the north boundary of this property: besides the above works, however, very large lodes shoot up occasionally along the whole range east and west of this great mining district that will, some time or other, if opened judiciously and worked economically, prove, in my opinion, rich and abundant in ores. Traces of gold are seen in some of these lodes, particularly where what may be called gold-associated blende occurs; and this description of blende seems to prevail through all the North Wales gold-fields. This blende, as introduced in my second notice on the Gold-Fields of North Wales, is easily recognised from the common jack of miners by its granular appearance and tinge, and is very rich in gold in the Prince of Wales Mine; yet we must not conclude that even the black blende is deficient of gold, as I have seen some specimens of common jack with grains of gold visible to the naked eye. The range of the gold deposits of this part of Merioneth seems to be north-east, as, proceeding along this range from the Prince of Wales Mine, we come to Casguernog, through which and in its neighbourhood strong traces of gold have been found. The gold here is found in the lead ore alone; but never it is said to a higher ratio than 15 dwts. per ton of ore. About a mile from Casguernog, on the general range as above, we reach Perthillydd, through which several veins of the ore-bearing character run, and lodes containing white and yellow iron pyrites, silver-lead, and blende—in all of which gold is reported to have been found. Several shafts and levels are sunk and driven at this property; and I have been credibly informed that at proportions from 60 to 200 ounces of gold per ton of ore raised from parts of the lode cut in a shallow winze have been extracted. These veins and lodes run through clay-slate, alternating with porphyritic schist, sometimes passing into massive siliceous rock of an olivaceous character.

Still proceeding north-eastwardly, we cross the River Mawddach, whose sands, in certain parts where deposits, taken down by the water, are left to rest, will, I am certain, be found rich in the precious metal. The whole of this great valley is more or less auriferous. Those divisions that have been experimented on, as Cwm Eisan Uchaf, and the adjoining parts south, contain numerous rich ore-lodes, bearing lead, blende, and sulphur ores, in which gold is found, and which, if worked, and the gold extracted by the modern approved economical mode now practised, would pay to some profit. It is true, some of the lodes are heaved here and there out of their regular range, but experienced mine agents find little difficulty in mastering these traverse cases, and finally arriving in harbours, where ores to reward them for their labours and pay for extra outlay, will be at their command in large deposits.

My attention to pressing calls in Merioneth and Carnarvon since I left London, did not allow me time to forward this paper last week, and as I am still engaged in inspections of mines of importance through the localities I have noticed, and others of equal interest, which I mean to notice, I am compelled for the present to defer the further survey of Cwm Eisan, &c., to my next letter, and will, therefore, close this by just remarking to your first Notice to Correspondents, that I understood Mr. Byers to mean that he examined and assayed a specimen given him from the gold lode at the Prince of Wales Mine by one of the directors; and as this lode is composed of quartz, in which are found silver-lead, blende, and gold disseminated through the lode, in quartz, which is to be seen in the very lode, in specimens of quartz taken to Sheffield and London, exceedingly rich in gold, which are open for the inspection of any person desirous to see them, and I trust to be found in specimens given to Mr. Byers this week for assay, &c., his article and his valuable analysis, so strongly corroborative of the extraordinary richness of the lode from which the specimen he examined was taken, will excuse the unintentional incorrectness of my notice. A splendid gold quartz vein has been cut in the continuance, east of No. 2 level, of the Prince of Wales Mine this week. This will, it is expected, speak for itself in a short time. Wishing prosperity to every legitimate undertaking in mining, whether in gold, lead, copper, iron, &c., I am, Mr. Editor, your obliged—

Beddgelert, Sept. 21.

ST. PIERRE FOLEY, M.E.

## BERDAN'S GOLD QUARTZ MACHINE.

The first report of the company, formed in New York last May, for the purpose of manufacturing Mr. Berdan's crushing and amalgamating machine, has been forwarded to us. The company was constituted under the general law of New York: the stock is \$600,000, represented by 24,000 shares, of the value of \$25 each; of this capital \$550,000 were paid to the inventor for his patent. A description of the machine appeared in the *Mining Journal* on the 20th of August; and, from accounts received from the United States, it would appear that it has been long successfully tested there, the report stating, that a profit to the shareholders has been made of eight per cent. in three months. According to some of the results that have been published, the ore from the Otter Creek Mine, in California, was found by weight to contain 98 lbs. 8 ozs.: this was hard quartz. The machine was fed with lumps about the size of a man's fist. The mercury used was first strained through a fine sieve, and weighed 34 lbs. 8 ozs. After the ore had passed through the machine, the mercury was drawn off, and in cleaning it from the sand, some of it was lost. After straining what remained through the same sieve, and in the same manner as at first, and taking out the amalgam, it weighed 1 lb. 4 ozs. less than the whole quantity put into the machine. The amalgam, after expelling the mercury, weighed 30 dwts., and, after reduction to fine gold, was found to contain 29 dwts. 9 grs. A portion of the tailings was placed in the hands of Professor Chilton, the eminent assayer, of New York, for analysis, and was found, upon test, to contain no trace of gold. Ores from Fluvanna and the Phoenix Gold Mining Company were likewise tried, with the same success. It is Mr. Berdan's intention to erect one of his machines at the Windsor Iron-works, Windsor-terrace, City-road, so that the English mining community may practically judge of its merits.

**NEW PLAN FOR THE VENTILATION OF COAL VESSELS.**—The frequent and lamentable explosions which have so often and recently occurred to the vessels and colliers engaged in the shipment of coal from the Welsh ports, have caused the adoption of a most ingenious plan for the prevention of these accidents. Vessels proceeding on long voyages, laden with the Welsh steam and other coals, are now generally fitted after the new manner, and into such favour has it risen that it is deemed indispensable by the Liverpool commercial community that vessels engaged in the foreign coal-trade should be fitted up on the improved system, which is done after the following manner. The great object is to prevent the accumulation of "foul air," and to do this a thorough draft or ventilation is gained by lining the hold before the vessel is loaded, with sleepers, bearing alternately from the deck half-way to the keel, and *vice versa* from the keel upwards. These are 4 or 5 in. in depth, and 3 ft. apart; and on them is laid a flooring, which passes the whole length of the hold, leaving the wide space underneath for the purpose of fresh air. This current is sent down from the decks by means of six wooden funnels, 12 or 18 inches square, which are placed perpendicularly, run two from the fore, main, and after decks each, down to the space left at the bottom of the hold, thus securing an uninterrupted passage for the fresh air. The inner surfaces are thus kept cool, and vessels on a six months' voyage need not apprehend any danger from explosion, as was formerly the case.

**COLONEL COLQUHOUN, R.A.**—It is with regret that we have to record the death of this gallant officer, who expired on the 17th instant, at his quarters, in Woolwich, from disease of the lungs, at the age of 62. Colonel Colquhoun first entered the artillery as second lieutenant, in the year 1808, and served with great distinction during the late war. He was subsequently principal commissioner to the Real del Monte Company, was Colonel-Commandant of the artillery in Spain, under General Evans, in which post he rendered great assistance to Lord John Hay and the British forces on that coast. Colonel Colquhoun in the year 1845 was principal commissioner for the valuable improvements he has effected in the gunnery department of the Royal Artillery.

## Mining Correspondence.

## BRITISH MINES.

**ALFRED CONSOLS.**—Field's engine-shaft is sunk 5 fms. under the 110 fm. level; the lode here is 7 ft. wide, worth 1200, per fm. for copper ore. The lode in the 110 fm. level, east of this shaft, is worth 1500, per fm.; and from the appearance of the lode in No. 2 winze, sunk below the 100 fm. level, we expect it to improve, as the lode in this winze is worth 2400, per fm. for copper ore; the south lode in the 110 fm. level, east of this shaft, is worth 450, per fm. for copper ore; this level is 6 fms. east of the shaft; this looks very promising. All the other parts of these mines are just as for some time past. The tribute department looks very promising. Painter's shaft is sunk 3 fms. under the adit level; the cross-cut in the same level will be communicated to this shaft in about a fortnight from this time. In the 50 fm. level we have 28 fms. to reach this shaft, and in the 80 fm. level 14 fms. 3 ft. —M. WALKER: Sept. 19.

**ANGARRACK CONSOLS.**—On Tuesday last our men completed the securing of the drain to the mouth of the adit, and on Wednesday they commenced securing the run, or ruin, in about 12 fms. from it. We are gradually draining the mine, and I expect by Friday next we shall have secured the ruin, and the water will be quite discharged from the mine, and shall be able to commence driving to explore the lodes east in the adit level. I have been to Sandys, Vivian, and Co.'s timber-yard, at Hayle, and taken out timber to secure the adit, and to make ladders to put into Mellinoweth shaft, so as to get a ladder-road, and to complete the adit. I hope by my next communication that the mine will be opened, drained, and secured, so that any member of the company may come and see the lodes, &c. —J. BARNATT: Sept. 19.

**BALLY HICKEY.**—The 5 fm. level, east of the engine-shaft, is much the same as when last reported: the slope is good ore ground, worth 1 ton of lead per fm. The 34 fm. level, east of the shaft, is much the same as last reported. I have broken some good lumps of lead from the south part of the lode. —B. FELLOW: Sept. 20.

**BICTON CONSOLS.**—We have cut the counter lode in the 44 fm. level, which is, as far as we can see, a very promising one; it contains good work, but we are not yet through it. The 34 south, on the same lode, is 18 in. wide, producing saving work. The rise in the back of this level also produces lead. The 14 is improved in size, and produces lead. Altogether our prospects are very encouraging. —Sept. 3.

—In the 44 fm. level we have driven through what we believe to be the counter lode, and are now preparing to drive on its course to the south-west. In the 34 the lode is 3 ft. wide, composed of beautiful prisms, flookan, munda, and lead, looking much better than I have seen it before, and bids fair to make a course of lead; in this level, in driving south on the main lode, we have met with another lode parallel with the counter, and about 7 fms. south of it; we have not yet cut through it; it appears to be large, and is letting down plenty of water. The 14 is also letting down water, which indicates our nearing a lode. Altogether I consider our prospects were never more encouraging than now. —ROBERT DUNSTON: Sept. 17.

**BLACK CRAIG.**—The men have cut the north wall in No. 1 cross-cut in the 32 fm. level, west of Welsh shaft, and are put to drive west on the best part of the rider rock. The men driving south of the winze over No. 2 cross-cut, in the 52 fm. level, are put to rise on the ore ground they have passed through. In No. 3 cross-cut south the men have driven through some ore ground, on which they are now put to drive west; the 52 is now extended 5 fathoms west of this cross-cut. The pits are looking much as usual. We shipped 50 tons of ore on Saturday last for the Holywell market. —R. WILLIAMS: Sept. 19.

**BOLENOWE.**—We have holed the winze from the 20 to the 30 fm. level, and are now preparing to drive the 30 east and west of engine-shaft. —W. ROBERTS: Sept. 7.

**BRYNALL.**—We are getting on pretty well in the mine. I still believe we shall be able to drive east on the lode at the end of this month. I have levelled the ground, and find that we shall have a 12 fm. level, instead of an 11, under the adit, as before calculated; of course, this will be all the better. In driving the adit level the lode shows it was very productive; we find it in many places wrought to the surface with scarcely any thing being done underneath the level. All our operations are progressing satisfactorily, and in a miner-like manner.

**BUTTERDON.**—The lode in the adit end is not quite so large, but still it is a nice looking lode. We have resumed the driving of the old cross-cut west, near the mill to intersect the same lode. —JOSEPH KENT: Sept. 20.

**CALLINGTON.**—The incline shaft at the South Mine is sinking favourably, the lode standing in the western side. The tribute pitch in the back of the 10 is looking well; the other lead pitches are looking much as usual. The back of the great south lode, as far as laid open, holds out good promise, yielding saving work for tin; we have two labourers here employed. —At Kelly Bray, the lode in the 80 east is 18 in. wide, composed of spar, munda, blende, and stone of copper ore. The 70 cross-cut north is driven 41 fms., the ground is more favourable for driving, being of a light blue kilas, still abounding with mineral branches from 1 to 6 in. wide; the lode in the 70 east is still in two branches, about 2 feet apart, they appear to approach each other going east; we expect an improvement here when the two parts form a junction. The lode in the 60 east is 20 in. wide, composed of spar, munda, peach, and yellow copper ore, yielding 1 1/2 ton of the latter per fm. —J. WOODCOCK, S. JAMES: Sept. 19.

We have interested ourselves in the 70 fathom level, and have cut north, which we suppose to be the north, or main part of Rowe's lode; it is 9 inches wide, composed of fluor-spar, mica, munda, and yellow copper ore, yielding 1 ton of the latter per fm., specimens of which Mr. Johnson has taken with him to-day, also specimens from the great tin lode. —MOSES BAWDEN: Sept. 21.

**CALSTOCK CONSOLS.**—In cross-cutting north from the eastern end, we are meeting with branches of copper ore, but have not yet reached the great copper lode; it must be near at hand, as the ground is becoming wet. The cross-cut is in 6 ft. No other alteration in the different workings. —W. B. COLLOM.

**CALSTOCK UNITED.**—The penthouse, winze, plat, &c., are completed at Varnish's 20 fm. level, and the numpmen have this day commenced sinking below the 20. I expect this shaft will intersect the copper lode by the next setting-day. The lode at the 20 east is 4 ft. wide, but less productive for copper, and principally filled up with sulphur and munda, and the clearing the deep adit west are getting on favourably, and working all working-time. We shall set another pitch for munda in the bottom of the shallow level this day. We hope to complete the cutting-down and dividing Caroline's shaft to the 28 fm. level this week; we have cut a branch in Caroline's 42 fm. level, 4 ft. north of the lode last cut, 12 in. wide, in which there is a rich leader of tin, and the average produce of the whole lode is from 1 cwt. to 1 cwt. 2 qrs. per ton of stuff, and the tin of good quality. —J. KERNICK, W. COOKE: Sept. 19.

**CAMBORNE CONSOLS.**—The lode in the 10 fm. level is improved, and now worth 200, per fathom; and in the winze sinking under the 10, produces 1 1/2 tons per fm. In the 40 fm. level cross-cut north, the ground is improving, and letting out more water than usual.

**CARADON WOOD.**—During the past month the winze has been sunk 3 fms., which makes its depth to be 4 fms. 4 ft. below the 43 fm. level; the cross-cut at the same level has been driven east 2 fms. 4 ft. 6 in., and we expect to cut the eastern lode in 2 or 3 fms. more driving, which I hope will be done within a fortnight. The main lode, at the above level, has been driven 5 fms. 3 ft. 3 in.; in this level it is ordered by a cross branch that come in contact with it; we have put the men to open it, to see if it is an east and west lode or not. The 30 fm. level south, on the eastern lode, has been driven 4 fms. 1 ft. 9 in.; the lode in this end is very small, and we have removed the men from this place to the bottom level, to fill the place of some who have left the mine. —JOHN HOLMAN: Sept. 20.

**CEFN BRWYN.**—The 38 fm. level, west of Taylor's shaft, is in a fine rich lode, and the 12 east is also good. The 12 and 24 west are not quite so good as they were. The dressing goes on well, and 60 tons of ore will be sampled this week.

**CHARLESTOWN UNITED.**—The lode in the end east of Truscott's engine-shaft, at the 33 fm. level, is about 2 1/2 ft. wide, producing a little tin; the lode in the west end at this level at present is small and poor. We have commenced taking down the lode (as referred to last week) in back of the 22 fm. level, which we find to be about 2 ft. wide, producing some rich work. In the slope east of the shaft the lode is also yielding fairly. The lode in the east end at this level at present is disordered by a slide. In the 10 fm. level the lode continues much as usual. We have commenced cross-cutting the lode again at 'Fat-work,' and are now in the capels, which we find very hard; the indications at this place are considered favourable. —W. and T. GRIFE.

**CHURCHSTOCK.**—A fortnight's work will complete the road upon which the men are now at work.

**CLEW BAY (MAYO).**—During the past week Duncan's shaft has been sunk 3 ft., and it is still very wet. The driving of the adit No. 2 and the shaft is about 4 ft.; it has become to be changing for the better, being more favourable for working; it has produced stones of quartz, with spots of ore. McCormick's shaftmen are busily engaged in timbering up the shaft, which I hope they will do this week, that we may resume the sinking of it next week. In the adit level, at Bender's, we have driven 7 ft. this week; this lode is 3 ft. wide, composed of quartz, capel, flookan, and kilas, with occasional good stones of very rich copper.

**CLIAH AND WENTWORTH.**—On Mary Ann lode the 16 fathom level is driven about 56 fms.; the lode is 1 ft. wide, producing good stones of black ore; driving by two men, at 20, per fathom. The slopes in the back of the 16 are still looking very well; more driving, which I hope will be done within a fortnight. The main lode, at the above level, has been driven 5 fms. 3 ft. 3 in.; in this level it is ordered by a cross branch that come in contact with it; we have put the men to open it, to see if it is an east and west lode or not. The 30 fm. level south, on the eastern lode, has been driven 4 fms. 1 ft. 9 in.; the lode in this end is very small, and we have removed the men from this place to the bottom level, to fill the place of some who have left the mine. —JOHN HOLMAN: Sept. 20.

**CLIVE.**—During the last three months the deep adit has been driven 18 fms. 3 ft. 3 in. In the bottom of the deep adit a winze has been sunk 3 fms. 4 ft. 6 in., making in the whole depth of 7 fms. 3 ft.; this winze has gone through a lode of about 2 ft. wide, with good stones of ore, but is at the present time nearly full of water. At Summer's shaft we have driven the 20 fm. level 3 fms. 4 ft. 6 in., and sunk a winze in the bottom of the 8 fm. level 2 fms. 3 ft.; this winze is nearly down to the 20, and the lode at this point has yielded good stones of ore, but the water hinders us from proceeding it. I should recommend to clear up some of the old pits to the west end of the sett. The lode in the deep adit level is very poor, and likely to continue so for about 20 or 25 fms. further on, where I expect to meet with an intersection of some of the branches from the patch, and most likely a string leading to Summer's shaft. Our crushing power is sufficient to crush a large quantity of stuff, and with good quality work would enable us to make large returns. —E. ROGERS: Sept. 21.

**COMBARTON CONSOLS.**—The engine-shaft is now sunk 4 fms. 3 ft.; the ground is nearly the same as when I last wrote. The stream of water in the shaft is nearly the same. The Smith's shop is ready, and he will begin to-morrow. The wall of the material house and office is to its height, which will be covered in to-morrow. The material house is on the floor, and the office an upper room, as one overlying will serve for both. I hope to have the wheel-pit cleared out this week for the masons to begin building the walls for the wheel-pit early next week. The men in the quarry are progressing rapidly. There are no vessels arrived yet at Barnstaple with timber, which impedes the building of the water-wheels. —J. THURBER: Sept. 21.

**CRAIGWEN (NEAR DINAS).**—In No. 1 adit, this week, the further we drive from the porphyry into the clay-slate the better is the appearance of the lode; the part of it we are now driving upon is 2 ft. wide, composed of kilas, carbonate of lime, blende, and silver-lead ore, yielding of the latter fully 1/2 ton per fm. I have no doubt but that this lode will yield a large quantity of silver, and we pass the silver and lead; it is not far off. The lode in the lower adit is fast improving as we drive into the kilas; it is about 4 ft. wide, composed of kilas, carbonate of lime, munda, blende, and lead ore, yielding 1 1/2 ton per fm., and very rich in silver. —HUGH JONES: Sept. 21.



**CREETOWN.**—Having carefully examined these mines, according to your request, I give you my opinion respecting them, and beg to say that I found the appearances, on the whole, more favourable than I had previously been led to expect. There is no doubt the mine is now assuming an important position, in reference to what it is likely to do one way or the other, from the changing from the gossan into what will be the future settled characteristics and composition of the lode in depth. The gossan, and what may be termed the primitive formation of the lode, has already held down a great depth from surface beyond what is usual—a fact particularly associated with the history of our best Devon and Cornish mines. Whether similar results are to follow in Scotland, and in this case, remains to be proved. However, although the lode just below the 12 ft. level (under No. 3), where the separation from the gossan appears to take place, does not at once resolve itself into the size and productive nature desired, yet from subsequent appearances in the shaft and at the latest point, I still believe there remains a very reasonable chance for the lode to improve, and become what I have all along expected it to be—a regularly productive lead lode; and I would by all means urge the sinking of the shaft to an undefined depth at present, till some change comes in, which in favour or against will, I feel assured, soon take place; at the same time, I am confident the regular deposit of ore dips west, and to be proved and overtaken will be followed by a level driven out after it from the bottom of the shaft, whenever it may be considered best and prudent to stop sinking. There was a promising looking lode in the 12 ft. level, and tolerably productive of lead when I saw it.—R. ROWE.

**CUBERT UNITED.**—The lode in the engine-shaft continues to yield good saving work. In the 45 ft. level west, the lode produces good stones of lead; this level to the east is still unproductive. The lode in the 35 ft. level west is worth 167 per fathom; in this level east the lode is improved within the last two days, it will now yield 5 cwt. of lead per fathom. The lode in the 25 ft. level west will yield 1 cwt. of lead per fathom. In the 15 ft. level west we are raising saving work. The engine-shaft at Trebellan has sunk 1½ ft. since our last; the lode here is unproductive. In the 46 ft. level north the lode is worth 107 per fathom. In the 36 ft. level north there are good indications for lead as we go forward. We have fixed balance-box on the bob at Trebellan, which is an improvement to the working of the engine; and the tram-road from the engine-shaft to the dressing-floors is proceeding with. Saturday next being setting day, a good tribute pitch will be set in the back of the 46 ft. level, south of Trebellan engine-shaft, which will be an addition to our sampling.—JOHN RODDA; MICHAEL MARTIN: Sept. 20.

**CWMYSTWITH.**—The prospects are improving: the lode discovered in Raw's level is large, and yields from 1 to 1½ ton of ore per fm. At Gill's upper and lower level the north lode is very good; the slope in the former has yielded 7 tons per fm. for all the ground broken; the lower level eastward yields 3 tons per fm. At Kingside and Penygellon good ore ground is opening. A return of 100 tons of ore per month can be maintained, if the weather is favourable for dressing.

**DARREN.**—I have suspended the cross-cuts in both levels, and shall set a slope in the cross-cut nearest the shaft, in the bottom level, where we discovered a portion of the lode that will produce from 10 to 12 cwt. of ore per fm. We have no alteration in the appearances of this mine since last reported, with the exception of the shaft sinking under the deep level, which is much improved, and will now yield about 1½ ton of lead ore per fm.

**DEVON AND COUTENAY.**—The lode in the winze will turn out full 4 tons of good ore per fathom. Every other part of the mine is much the same as last reported.—T. BAWDEN: Sept. 20.

**DRAKE WALLS.**—Matthews' shaftmen are now preparing to sink below the 70 ft. level, and we hope will be ready to sink by the middle of next week. In the 70 ft. west of Matthews' shaft, we have cut a large cross-course, which we expect has heaved the branches about 3 or 4 fms. The 70 ft. level, east of said shaft, is producing good work for tin; the 60 ft. level, east of said shaft, is producing good work for tin; this level has a very promising appearance, the ground being much more favourable for driving than it has been: the slopes in the bottom of this level are producing good saving work for tin. The branches in the 40 ft. level, east of said shaft, are rather improved for tin during the past week; the slopes in the bottom of this level are producing tinstuff of a coarse quality. In the cross-cut south at the 60 ft. level, we have cut through four or five small branches, all of them producing a little tin. The 70 ft. level, east of said shaft, has improved for tin during the past week; the slopes in the back of this level are producing tinstuff of a coarse quality; the slopes west of machine, below the 60 ft. level, are producing good saving work for tin. The footway shaft is cased and divided from surface to the 60 ft. and is ready for the pitwork and drawing. We are now waiting for the iron to make the rods, which I hope will be on the mine tomorrow or on Monday next, and while the smiths are preparing the rods we have set the men to sink below the 60 ft. and hope to sink 9 ft. or 2 fms. without the lift: in sinking we find the branches are of a very promising character. The angle-bob is erected, and a great portion of the pulley-standards ready for erection, and as soon as the smiths can get the rods ready, we shall be able to work, which will be in about a fortnight or three weeks.—HENRY SKELTON: Sept. 16.

**DUNSEY WHEAL PHENIX.**—All our operations are proceeding satisfactorily. **EAST CROWDALE.**—Matters here have not changed much since last week. The lode in the end will be taken down in the coming week, at the end of which you will be informed of their nature. The shaftmen have finished the casing of the shaft, and are now cutting pit, which we hope will be finished by setting-day. The pitch on the south lode has improved a little; and the others on the north lode are without alteration since my last.—Sept. 17.

**EAST DARREN.**—The two bottom ends, or 32 ft. levels, prove the lode promises well in depth. The end west from Taylor's shaft yields one ton per fathom, and has scarcely been driven 2 fms. without ore, and that east from Reed's has been rich for several fathoms past, and still yields 3 tons per fathom. In the adit west the lode is yielding stones of ore. Some other works of trial are in progress at this mine. About 80 tons of good silver-lead ore will be sampled this week.

**EAST GRIT.**—The men have not reached the deep level, although the shaft is down 75 yards; I find we are a little to the south of it. Every effort shall be made to get an opening, which may be effected in a few days, when we shall immediately prepare for driving on the course of the lode, in order to get under the pipes of ore we met with going down in the 29 ft. level; we shall then have nearly 20 fms. of backs to work. In the 20 fathom level we expect we are approaching the cross lode, water having appeared, which is daily increasing. I have set the men to make a pond for 12s., in order that the ore may be washed.

**EAST POLGOOTH.**—The shaftmen have fixed the bearers and cistern for plunger-lift. There is no alteration in the 30 ft. level; in the 30 ft. level the lode is divided into branches; I see but very little difference in the appearance of the lode in the slopes west in the 30 ft. level, it is now nearly 9 ft. wide. The slopes east of winze in the 30 ft. level are looking better for tin. No alteration in the cross-cut north. The lode in the 20 ft. level is large as last reported. We still have good stones of tin in the slopes in the back of the 20 ft. The work at the stamps is coming out just as it has been. The engineers have fixed the condensing work, and are now about the nozzles. The founders are getting on well; they promise us there shall be no more delay.—Sept. 17.

**EAST TOLGUS.**—No lode has been met with in either of the cross-cuts since last setting day. The lode in the adit, east from new shaft, is 15 in. wide, and by 2½ ft. high from the bottom of the end, composed of muddle, peach, prun, and spots of yellow ore.

**EAST WHEAL GEORGE.**—Since my last, the summen have eased and divided the engine-shaft from the 32 to the 44 ft. level; they commence driving towards the lode on Monday next (Sept. 19); the 12 east is without alteration. The pitches are yielding fair work.—Sept. 17.

**EAST WHEAL RUSSELL.**—We have resumed driving the Tunnel level end west again. The slopes in the bottom of the winze are looking well, producing fine rocks of grey ore; we shall be obliged to stop this shortly, as the water is fast upon us, and very inconvenient for most of our work; we must drive on our deeper levels, and sink our shafts, so as to take away these ores with less expense. We have sunk Hitchens' shaft since we commenced below the 66 ft. level 4 ft. 6 in. below the cistern; the lode in the bottom of the shaft is producing as fine gossan as ever I have seen since the commencement of the shaft. We have driven east in the 66 ft. level from 3 to 4 fms. on the south part of the lode, which is just the same as the lode in the cross-cut; this level, I think, will ultimately be the richest of all the levels now driving, as we have so much grey ground above and below us. We have broken some fine stones of yellow and black ore this week from the 55 east. We have driven the cross-cut north in the same level, west of Hitchens' shaft, 4 fms. and upwards, on a most splendid lode—a more promising one cannot be seen. The 45 east is just the same as last reported, never without ore. We have cut more water in the cross-cut driving north in the same level this week, but no lode yet, more than the lode cut many fathoms below the present end, which have already been reported on. We are driving in the adit level towards Hamersham's shaft with all possible speed, which, I believe, will take off the surface water from this shaft, as we have cut water in the present end in the last few days' driving. In my last report, the cross-cut in the 55 ft. west of Hitchens' shaft, is stated to be 4 ft. wide; it should be 4 fms.—W. METHERELL: Sept. 22.

**ESGARIE LEE.**—The slope in the back of the deep adit, west of Harting's rise, will produce about 14 cwt. of lead per fm. The slope in the back of the 12 ft. level, east of the same, will produce about 10 cwt. of lead per fm. In the slope in the back of the shallow adit, west of the same, the lode is not yet taken down. In the winze sinking below the deep adit, the lode is not quite so large or productive as it has been, but it is still producing saving work for lead. In the 10 fathom level, below the adit, the lode is from 3 to 5 ft. wide, principally composed of clay-slate, intermixed with carbonate of lime, muddle, and some stones of lead ore, but not of sufficient quantity to pay for dressing. In the 12 ft. level, and below, the lode is small and unproductive, and the ground much harder for driving.—JOHN LEAN: Sept. 19.

**EXMOOR ELIZA.**—The 30 ft. level is being driven west by six men; the lode is not so wide as when first discovered, it is, however, beautifully defined, kindly, and productive, worth at least 2 tons of good ore per fm. Having driven on this lode as far east as the cross-course, we are now cross-cutting south towards it, and intend to continue the driving south to intersect the south lode; we have set this to six men, at 5 ft. 10 in. per fm., 1 ft. stent. We are still driving the 24 ft. level west, on south lode, but till now (I have engaged three additional men for this place) we have had only two men here: there is no improvement here. Our engine works well. We have had no hindrance for some weeks past.—W. DENNIS: Sept. 22.

**FAT-WORK AND WHEAL VIRTUE.**—The lodes in the different parts in operation at these mines are precisely the same as last reported.—JOHN BARRETT: Sept. 20.

**GAWTON UNITED.**—At Torkington shaft, the ground continues favourable. At Fuller's, the lode is much the same as last reported, and at Bayly's we have hard branches of spar. In the deep adit, we are still engaged cutting down lead, &c.—H. HODGKINS: Sept. 21.

**GIFRON.**—The lode in the 15 ft. level is 15 in. wide, producing good stones of ore, and looking more kindly than it has been. We are driving the shallow adit with all speed, and hope in a fortnight to commence sinking Cumming's shaft again. Young's shaft is progressing satisfactorily. The tribute department is without alteration. I shipped at Aberystwyth on the 15th inst. for Swansea computed 21 tons of ore for the next sampling.—Sept. 17.

**GORN (LEAD).**—The lode in the adit end this week is not so good; it continues to carry a leader on the footwall on the north part; this leader is about 6 in. wide, intermixed with lead ore, &c.; the remaining part of the lode is in a very strong light blue kyllas, or as some term it clay-slate; the breadth unknown at present. The cross-cut going south in the shallow level before the adit end is in very kindly ground, with counter branches of spar, muddle, &c., dropping into the lode, and water continues bursting out of the end. The cross-cut going north-west of the winz-shaft still continues very hard.—R. MAYNARD: Sept. 17.

**GREAT FOLGOOTH.**—The new shaft is sinking and rising by 27 men, and the ground during the past month has been favourable. There is little or no alteration in the tribute department. We have sold black tin, on 1st Sept., 11 tons 5 cwt. 3 lbs., at 72/- per ton, 812/- 15s. 11d.; and 21st Sept., 17 tons 1 cwt. 2 qrs 3 lbs., at 60/- per ton, 1270/- 1s.

**GREAT TREGUNE CONSOLS.**—Hobler's shaft is now getting near the lode, and the ground congenial for tin. The lode in Carke's shaft is without alteration, except that the copper in the lode is getting more yellow, and of a finer nature. A more splendid lode at such depth I never saw. We are breaking tin in the level we are driving to intersect the new lode, and it is of excellent quality.—Sept. 20.

—The branches of the lode are now coming into Hobler's shaft, and the ground is looking beautiful. The lode at Carke's, in the shaft, looks splendid. The new tin lode is not yet cut, but we are expecting to do so daily. We are dressing a small sample of the tinstuff we found in driving.—Sept. 22.

**GREAT WHEAL BADDERN.**—The lode in the 40 ft. east from Bryan's, is as last reported. The lode in the 30 ft. east is 1½ ft. wide, producing good work for lead. The tin lode west from Sanderland's is still large. We sold, on Wednesday last, 19 cwt. 1 qr. 13 lbs. of which brought 72/- per ton. The masson are getting on with the new engine-house; and I hope within five or six weeks to see the roof on, when we shall put in the engine, and set her to work very quickly.—JOHN BODDERS.

**GWYNLLIFION (LEAD).**—I have nothing particular new to report this week. We have recommenced the sinking in the shallow adit, and are continuing the driving west to cut the middle Shoemaker's lode; when that is cut we shall drive north upon it to where the two lodes fall together. We shall soon get the lode through to the Shoemaker's lode. The ground continues still very hard in the deep adit. I expect a vessel to Trefriw Quay next week to load the ore.—HENRY RAWSON: Sept. 22.

**HAYON AND HENFWLLIC.**—We have not done anything at the engine-shaft during the past week. We are still sinking Davis's shaft, but very slow at present, on account of the water, and the ground being very hard. We intend to put a pair of men in the deep adit to rise in the back, to meet the men in sinking. The winze in the deep adit is now being finished, with the exception of building round the frame and pointing the walls. All other things are going on much the same as last reported.—JAMES SANDERS: Sept. 16.

**HAWKMOOR.**—We have set the 30 east to six men, stent 1 fm., at 12/-; we shall take down the lode in this end to-morrow, which produces good work for tin. In the 30 west set to four men, stent 3 fms., at 9/-; this end is producing good work for tin, but nothing worth reporting for copper. Graham's shaft is 5 fms. 5 ft. below the 30, and the shaftmen are cutting cistern pit for the plunger lift. The slopes in the back of the 30 ft. level set to four men, 3 fms. stent, at 6/-; some good branches of ore, but not regular. In continuing we have cut two small branches on the line of the lode, but we intend to use a few feet deeper, and this work will take us a day or two to complete.—JOHN KENNEDY; JAMES RICHARDS: Sept. 19.

**HENCKOCK.**—The ground in the 60 fathom level, south from engine-shaft, has improved within the last week, and the 30 ft. level south no lode has been taken down since last report; the ground by the side of the lode remains without alteration. The 30 ft. level is progressing rapidly towards the south winz-shaft on the eastern side of the lode, the same showing good stones of lead; the ground in the south winz-shaft still remains without alteration, good for sinking; we have six men sinking this shaft as fast as possible. Our air-machine is made complete, and we are in a position to put it in, and to commence the driving of the 40 ft. if we can get men. All our machinery is in complete working order, and doing well.—H. RICHARD: Sept. 19.

**HILL BRIDGE CONSOLS.**—The branches of tin still hold good, and are rather improving. All our operations for the machinery are being pushed forward as fast as possible.

**HINGSTONE DOWN CONSOLS.**—The lode in the 65 ft. east of Morris's shaft, is less productive of ore than when last reported on; as also the 65 ft. west of Dodge's winze. The lode in the 65 ft. east of Dodge's, will yield 3 tons of good quality ore per fm. The lode in James's winze, sinking below the 55, produces good saving work; the 55 east of James's, is improved, being worth at present about 1½ ton of ore per fm. The slopes throughout the mine continue to turn out fair supplies towards the next sampling.—W. RICHARDS.

**HOLMBUSH.**—The ground in the 145 ft. level cross-cut, south of the shaft, is favourable; the lode in the 14 ft. level, west of the diagonal shaft, is 15 in. wide, producing 2 tons of copper ore per fm., worth 10/- per ton. A box of specimens from the end I send you per this post. There is no alteration in the 155 ft. level, west of the diagonal, on the Holmbush lode. The flap-jack lode in the 130 ft. level, west of the cross-course, will produce 4 tons of ore per fm., but a much better lode in the bottom of the level. The lode in the 120 east is 2½ ft. wide, producing 1½ ton of ore per fm. We have made a communication in the 110 ft. level, between Hitchens' and Wall's engine-shafts, thereby ventilating the mine in this part, as well as bringing the stuff to draw. The lode in the 124 west of Wall's engine-shaft, is 3 feet wide, composed of spar, muddle, and stones of ore. The ground in the 124 cross-cut, north of the shaft, is moderate, still letting down a pretty deal of water.—Sept. 20.

**KIRKCUDBRIGHTSHIRE.**—The lode in the 110 ends, east and west, continues a good size, with spots of lead through it. In the 98 end east the lode has a rib of spar on the north side, with copper and sulphur through it. The lode in the 86 end west is making a little ore towards the back. The ground in the 12 end, east of Butler's, is better, and the lode nearly 4 ft. wide.—R. WILLIAMS: Sept. 17.

**KESWICK.**—Brandley: We have put the engine to work pumping, and six men have resumed driving towards the vein; the ground at present is hard; six men are engaged putting in the timber and slides for drawing. Stoneroff: Richardson's slope is worth 10 cwt. of lead per fm.; the east slope is worth 10 cwt. We have let the bottom level to the sinking men at 1/- per fm.; we have a good vein here. As we are short of men, I would not advise sinking at present.—Borrow Mine: Wilkinson's level is worth 10 cwt.; the middle level, 8 cwt.; the bottom level rise, 8 cwt.; Thorntwaite Mine: The 27 ft. north slope is worth 25 cwt.; this place is improving, and the ore dipping in north where we want it. We have not yet drained the sump, and I cannot account for it as we are cutting water every shift with the bottom level; it cannot be long first. The 37 ft. level has been very hard and poor, and very bad to work, but I am glad to say there is a change for the better in all respects, worth 4 cwt. to the fm.—L. R. SHEPHERD: Sept. 17.

**KILBRICKEN.**—The lode in the 39 ft. level, south of new engine-shaft, continues to yield good stones of lead and jack, and is very promising. The winze sinking below the 22, south of new engine-shaft, is much the same as last reported. The 20 ft. level east still produces good stones of ore. The 20 ft. level north is rather harder than usual, and does not produce quite as much lead as last reported, but an influx of water gives me reason to think we are near better ground. The 16 ft. level east yields some ore, which is saved; the 16 north is at present suspended. Two of the committee were here the greater part of last week, and I am proud to say that, at the close of their minute investigation of the books, and survey of the mine, they expressed themselves highly pleased and satisfied with my exertions as the company's agent.—JOHN PACE: Sept. 19.

**LEWIS.**—In the engine-shaft there is no alteration since my last. The north lode in the 100 ft. level from engine-shaft is 1½ ft. wide, unproductive for tin; in this level east the lode is large and hard for breaking, which is preventing us from getting east under the tin ground so soon as we expected. The lode in the 90 ft. east from Praed's shaft, is 2½ ft. wide, low price stamping work. In the 80, east from Praed's shaft, we have had some good stones of tin, but the present end is not so favourable. We have put the men to rise from this to the 70 ft. level for ventilation. In the 70 and 60 fathom levels the lode is small, with stones of tin, but not of sufficient quantity to value. The south lode in the 90 ft. level, east from tin shaft, is 2 feet wide, worth 12/- per fm.—MARC ECKED: Sept. 19.

**LOVEDEN UNITED.**—The lode in the 10 ft. level, east and west of the engine-shaft, is 5 ft. wide, with a mixture of ore throughout, yielding 12 cwt. per fathom in each end. I think a lode of a more promising character cannot be seen in any country than this. The two slopes in the back of this adit level continue yielding fair quantities of ore. We have cleared up one of the old bottoms at Pen-y-bank, which is 6 fms. 3 ft. below the bottom of the shaft; the lode here is from 5 to 6 ft. wide, and will yield 25 cwt. of ore per fm. We shall commence sinking this shaft immediately to a depth of 12 fms.; then extend a level under the old workings, so as to slope the backs, instead of working underhand, as the old men in the end, which will be a saving of work, and will be finished next week, so that we shall commence crushing immediately after.

**LYDFORD CONSOLS.**—We sampled, on Monday last, computed 9 tons of lead ore, which will be sold at 30/- per ton. The lode in the western adit in the western adit level continues to give unmistakable indications of what we may expect on deeper prosecution—viz., large courses of lead ore.—JOSEPH RICHARDS: Sept. 21.

**MIXON GREAT CONSOLS.**—Our men are busily engaged in taking down the eastern shaft, and the boiler-house and steam engine are going up rapidly, and the surface operations progressing favourably; I am pushing on these as fast as I can, so that we may be able to lessen our cost. We shall soon begin to erect shafts and capstan, when that is done the engine work will be put together speedily. We are also preparing a site for the small engine-house.—WM. BISHOP: Sept. 21.

**MOLLAND.**—The lode in the engine-shaft sinking below the 52 is small and poor. The lode in the 52 east is 4 feet wide, producing saving work, though not rich. The lode in the 42 east is large, and producing good stones of ore, though still mixed with kyllas; the slopes in the back of this level are not quite so good as last week, in consequence of the men having met with a slide, which has disordered the lode. I expect, however, that it will make through again. The lode in the winze sinking below this level is at present being taken down two men from here, and put them to rise in the back of the 52, against the same; here I expect we shall effect a communication in the course of a few days, when we shall be able to slope the ore ground both east and west of the winze. The pitch in the back of the 42 west being poor, I have allowed the men to shoot a few holes in the back of the 42 east against survey day. The lode or branch in the adit, at the eastern hill, is 9 in. wide, with spots of ore.—T. BENNETTS: Sept. 21.

**NANTOES AND PENRHIFY.**—The rise in the back of the deep level (Eystunite lode) is progressing favourably, and as there are only about 2 fms. more to drive, we expect to have it shortly communicated with the winze from the middle level; the lode is 3 ft. wide, composed of kyllas, muddle, and lead ore. The 46 ft. west of Taylor's shaft, is 5 ft. wide, composed of clay-slate, spar, muddle, and spots of lead ore. The lode in the slopes in the back of 30 and 25, east of Taylor's shaft, is 4 ft. wide, yielding 8 cwt. of lead ore per fm. The lode in the 30, west of Taylor's shaft, is large, with much water issuing from it, composed of spar, muddle, and lead ore; the lode in the slopes in the back of the 30 ft. level, 120 fms. east of the cross-cut, is 6 ft. wide, yielding 1½ ton of lead ore per fm. The works on the Penrhify Mine are all completed, with the exception of the drawing-machine. We expect to have the new wheel at work on Saturday next, and when this mine is drained, shall be in a position to increase the returns.—JOHN WILLIAMS: Sept. 20.

**NORTH DOWNS.**—In the rise above the 100 fathom level, east of west shaft, the lode is 18 in. wide, but little ore. In the 90, east of west shaft, the lode is 1 ft. wide, with stones of ore. In the slope below the 90, the lode is 2 ft. wide, worth 70/- per fathom. In the slopes in the back of this level the lode is 15 in. wide, worth 34/- per fathom. In Michael's cross-cut they have not cut any lode or branch as yet. It does not know of anything new.

**NORTH FRANCES.**—We are cutting a pit north of the engine-shaft, preparatory to a cross-cut to the tin lode, and shall complete it next week and resume sinking the shaft, which is now 31 fms. deep; the ground is good, both in the shaft and cross-cut, the water next to nothing. The new shaft (Stainby's) is down 13 fms., water rather quick. We are preparing flat-rods and pitwork for this shaft, or the winter rains would prevent our sinking, and it is of great importance to get it sunk as speedily as possible. In the cross-cut from old Great Dolcoath, the ground is very hard.—T. GARLAND: Sept. 17.

**NORTH TOWY.**—The lode in the deep adit level is 7 ft. wide, and composed principally of gossan, with some large stones of lead; the bottom of the level will produce a ton of lead per fm.; and as this end is only 20 fms. north of the slopes, where we have the lead in the back of the shallow adit, I fully expect an improvement—a more promising lode cannot be seen. In the shallow adit the lode is now small and unproductive. The lode in the winze under the shallow adit is very large, and producing saving work. The slopes in the back of this level are not quite so good. We have now about 10 tons of lead on the floors, in addition to that already dressed.—W. H. KEYNES: Sept. 17.

**NORTH WHEAL BASSET.**—In the new shaft, sinking below the 102 ft. level, the lode is 3 ft. wide, composed of spar and yellow ore, yielding about 1 ton of the latter per fm. In the last two months the 102 ft. level has been driven west of the new shaft 14 fms., the lode producing on an average 5 tons of ore per fm.; the present end is 16 fms. from shaft, and the lode is 3 ft. wide, worth 30/- per fm. At a point 12 fms. west of the shaft a winze is sunk from the 92 to the 102 ft. level, the lode producing 7 tons of ore per fm. The slopes in the back of the 102 ft. level are worth 40/- per fm. In the 92 ft. level, driving west of the new shaft, the lode is 2 ft. wide, yielding 1 ton of ore per fm.; in the 92 ft. level, driving east of the new shaft, the lode is unproductive. In the winze sinking below the 52 ft. level, east of Lyle's shaft, the lode is 1 ft. wide, worth 9/- per fm. In the 52 ft. level, west of Lyle's shaft, we are driving by the side of the lode, our object being to explore the same channel of ore ground they have in driving east in West Basset. At Lyle's shaft, in the 102 ft. level, we are driving a cross-cut south, to intersect the south lode. In the 82 ft. level, driving east of Miner's shaft, the lode is 3 ft. wide, mixed with grey ore. In the 72 ft. level, driving east of Miner's shaft, the lode is 2 ft. wide, mixed with grey ore. In the western part of the mine, in the last two months, we have sunk a shaft 25 fms. from surface, and intersected a lode 18 in. wide, composed of gossan, mixed with black ore, and are now sinking on it under the adit level; in the same level we are driving a cross-cut north, to intersect the north lodes, which are so productive in South Basset. The ground laid open on tutwork in the last two months is 102 fms. 4 ft. I estimate net sampling to be about 200 tons of ore.—T. GLANVILLE: Sept. 19.

**NORTH WHEAL ROBERT.**—The lode in the 52 ft. level, driving east and west from cross-cut continues to produce good stones of ore. The rise in the back of the 42 is improving, yielding about 1½ ton of ore per fathom. The 30 driving west is not so productive as it has been; the slopes in the back of this level are looking well, producing full 2 tons of good ore per fathom.—A. PAYSON: Sept. 19.

**OKEL TOR.**—The branches of rich copper ore and spar still continue in the north cross-cut driving south on the cross-course; these branches are taking off into the kyllas by the side in a south-east direction, and water is now beginning to flow from the cross-cut, which warrants the supposition that a productive copper lode is near at hand. The kyllas by the side of the cross-course is most congenial for producing copper ore.—W. B. COLLIER.

**PARKWYN AND CARWALSICK.**—The masons are now actively engaged in building the smiths' and carpenters' shops, material house, office, &c. The men are progressing favourably in cutting down and timbering the shaft, &c. Our engineer arrived on the mines on Wednesday with plans of engine-house, which will be erected with the utmost dispatch. Every branch of operations are being carried on in the most satisfactory manner.—JOHN DALE: Sept. 22.

**PENCOARSE CONSOLS.**—The slope in the back of the adit, west of shaft, is worked up as far as the gossan, which is of a beautiful character; we have since put the men to work on a new slope near the shaft, and in opening it we find some of the best stones of ore ever broken in the mine, some 14 lbs. weighing out of a regular size, well-defined lode. The eastern slope is just as last reported. The engineer was here with his plans on Saturday, and in the course of a few days the masons will commence to erect the engine-house. We expect some of the materials from the Bodmin Consols this week. Some of our men are there taking the pitwork to surface. The piles of ore on the floors will now amount to about 60 tons.—J. DALE; J. EDWARDS: Sept. 19.

**PENHALE CONSOLS.**—We are now about to commence sinking the engine-shaft under the 74 ft. level to put in bearers and cisterns for the plunger lift; in order to complete this work as quick as possible we have put on 16 men. In the 74 north the lode is split; the ground is good, and producing 6 cwt. of ore per fm.; in the same level south the ground is good, and the lode 1 ft. wide, producing 5 cwt. of ore per fm. In the 64 ft. level south the ground is good, but this part of the lode is poor, and we have commenced driving a cross-cut west to cut that part of the lode. The 64 ft. level, south, is sinking under the 56 ft. level, the ground is moderate, and the lode 1 ft. wide, producing 2 cwt. of ore per fm. In the 56 south the ground is good, and the lode 10 in. wide, producing 2 cwt. of ore per fm. In consequence of the great increase of water we are prevented from clearing Morcom's shaft any further before we have changed the working barrel from 8 to 9 in., which we shall do in a few days. In the 38 ft. level north, in consequence of the adit level being so troublesome, we are compelled to drive by the side of it. We have been to get the free water for the use of the boilers on the mine by the end of this week, and shall sample about 60 tons of ore on Saturday next. There is little or no alteration in the tribute department since our last.—S. MITCHELL: Sept. 19.

**PENHAUGE.**—The lode in the adit end north is 1½ ft. wide, composed of the finest gossan, with some lead intermixed. The shaft is sunk on its course 5 or 6 fms., and the lode is of much the same character as in the adit end.—JOSEPH KERR: Sept. 20.

**PENILYNE COURT.**—The west shaft is now down 9 fms., and the lode more than 6 ft. wide, producing good lead; this lode improves every fathom we sink, and is the best I ever saw in this county. The men will finish their bargains of squaring Jerry's shaft this afternoon; it is now 7 fms. deep, and large enough to receive the engine, and as it is most desirable to get this shaft down as soon as possible, I shall put four extra men on next week, if we can get them, which number will take the shaft down another 7 fms. in two months—that is, to within 10 ft. of the bottom. At No. 2 there is no alteration since my last.—LAWIS WILLIAMS: Sept. 21.

**PERRAN WHEAL ALFRED.**—We have sunk to the 20, and the men are cutting a pit.—JOHN DAVIES: Sept. 22.

**PERRAN WHEAL JANE.**—In sinking the shaft we are so close upon the lode that the lode is coming out in every direction, and consequently we are draining Pitt's shaft, situated about 70 fms. east of engine-shaft; the stratum is very congenial for mineral, and full of branches.—JOHN DAVIES.

**POLITMORE.**—On Monday the lift of pumps were dropped to reach the 20 fathom level, and I expect will be completed by Saturday next. The gossan in the eastern level continues very good.—EDWIN MAUNDER: Sept. 21.

**PRINCE ALBERT CONSOLS.**—We have finished the incline in the shaft from the 20 to the 30, so that we can draw from the bottom with the whim. In driving east of cross-course we have cut the shoot of tin seen in the 10, only very much richer than we ever saw it before; the lode is 3 feet wide, well-defined, and, in short, we have a good course of tin.—Sept. 22.

**RATLINGHOPE.**—The driving in the deep level is continued by three men.—R. P. EDLSTON: Sept. 20.

**RITTON CASTLE.**—We are not proceeding so well with the engine-shaft for the last few days, as I cannot get teams to draw bricks on any terms; I expect this difficulty will, however, be got over next week, when the walls will be completed, and the shaft, I think, will stand without any additional brickwork. The carpenters are getting on well with their work.

**RHOYDD (SLATE).**—The time has arrived for commencing a make of slates from floor No. 1, to which end we have just set on three men—one to work away the slate, and two to split and chop; the work, consequently, appears a small make of slates upon the next pay list. Having had occasion this week to follow the slates rock under the bottom of floor No. 1, we have thus seen a few feet into the rock below (to which level No. 2 is in progress), and rejoice to inform you that the quality and appearance of that below is so good as to warrant us in asserting that the Rhoysd Slate Quarry is equal, if not superior, to the best in Merionethshire. There are two miners driving level No. 2 every eight hours, making six miners in the twenty-four, and a labourer clearing their rubbish; this is as many as could be advantageously employed at present. Attention is now being turned to the letting of the cart road from the northern level to the upper end of the join, in order to get the carts to the top. As soon as men can be got together the work shall be started.—THOMAS JONES; JOHN HARPER.

**RIX HILL.**—I have to inform you that at this mine there is nothing new to report this week. The end driving west on Ward's branch is still good; east not quite so good, being mixed more with elvan. I have stopped the cross-cut north, from an impression that we shall find no more north lode than the branch called Ward's, which must have been carried south by the elvan. I have put the two men who were in the cross-cut to drive west at the 17, at Hockin's late pit, where the lode is large and producing some tin, and though not considered good enough by the tributers to pursue, I think it worthy of further exploration. We have had some men setting the new plunger lift, which is finished, and we shall begin to put down the lift next week. The pitches are not much altered. We are burning, and shall sample next week.—Sept. 17





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GRAND DUCHY OF BADEN CHARTERED MINES:—

Countries from which imported.	Quantity charged with duty.
South Australia .....	Tons 8877
New South Wales .....	131
Victoria .....	488
New Zealand .....	74 = 9,570
British North America .....	662
East Indies .....	119
Cape of Good Hope .....	26 = 807
<b>Total from British possessions .....</b>	<b>Tons 10,377</b>
Cuba .....	Tons 17662
Chili .....	5587
Spain .....	1928
France .....	691
Peru .....	472
Algeria .....	571
Bolivia .....	307
Norway .....	165
Italy .....	148
Tunis .....	100
West coast of Africa .....	56
Other parts .....	38 = 27,725

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## THE IRON AND METAL TRADES OF SOUTH STAFFORDSHIRE.

[FROM OUR CORRESPONDENT IN BIRMINGHAM.]

Notwithstanding the unfavourable influences arising from the unfortunate complications in the East, the doubtful state of the harvest returns, and the threatened approach of the dreaded epidemic, the trade of this town and district continues to exhibit its accustomed buoyancy, if not a rather anomalous prosperity. The state of the iron market is said to justify higher rates, and that prices are certain to advance. Of this I am quite certain, that contracts have been refused at present prices, and when one house alone can show orders for 50,000 tons of rails, together with a demand for other descriptions of iron cannot be exceeded by the firm in less than three or four years. It is no wonder if prices advance, however doubtful the prospect of maintaining them may be. With, however, the Bank of England 5 per cent. screw starting up in the face, and corn up here to-day 2s. or 3s. per quarter, the property of being hurried into the adoption of an unreasonable tariff, injurious to the manufacturing interest, must be obvious; and these considerations will, I am sure, influence those who rule the trade. The small masters, who have been selling at 10s. per ton under the quotations of last quarter-day, have advanced, and there is now a uniformity of prices.

Exclusive of the above, there is another important consideration, which cannot be lost sight of—I mean the labour market. The men now receive the wages they did when iron was quoted at 2l. per ton higher than it is now, and they are satisfied; but raise the quotation 2l. per ton, and the great probability, if not certainty, is that with a rising loaf they will demand an advance, followed by strikes and confusion. At Wednesday there is a great quantity of iron being made for the patent joint rails, chiefly for America; and the same will apply to almost every description of iron for the same market, notwithstanding the extraordinary accounts in the last Number of *Brother Jonathan's Mining Journal* of their mining operations in the States.

The coal trade of the district is rather in an unsettled state; some uneasiness is felt respecting the colliers. They are becoming unsettled; and I have been informed this evening that some of them have struck for an advance, in the neighbourhood of Tipton; and I know that others in the district have given notice of advance of 6d. per day. If this demand is not complied with, a strike to some extent at all events is certain. The price of coal is advancing, and likely to still further rise, in proportion as the consumption for domestic purposes increases. Although the above may fairly represent the condition of the two great staple trades of the district, the reports from the merchants are not quite so flattering.

The London and Australian houses have held back their orders for general hardware and cutlery during the last few days, accompanied with intimations that they will wait awhile, and I understand nearly all other foreign merchants manifest a similar disinclination to order. This reserve, however, has not as yet in any way affected the manufacturers, who have had unfinished orders on hand to a considerable extent.

In the metal market there has been during the week the usual amount of uneasiness and activity. The tin workers are yet unable to procure the raw material at any price, and are threatened with another immediate advance for whatever may be doled out to them, and this state of things will continue until circumstances shall arise to release the stocks purchased by the speculators at the Dutch sale last month. In the copper trade, the demand has been brisk during the past week, but without any advance of price. How long this may continue is not quite certain. Private advices received here this morning from Cornwall mention considerable dissatisfaction amongst the miners, and the great probability of a strike for an advance of wages.

Amongst the latest exports from this locality may be noticed several hundred crates of fluted glass for railway stations in Spain, between Madrid and Barcelona, made at the works of Messrs. Chance, Spon and Co., and this extensive consignment is exclusive of the manufacture of the enormous quantity of the same article now being used in covering in the station in New-street, in this town. The iron roof of this stupendous undertaking is now being covered with fluted glass, and when finished and incased from the stacks of old houses and chimneys by which it is surrounded, will present the finest station in the kingdom.

## THE COLLIERIES' TURN-OUT.

The coal-proprietors and agents of the Wigan district held another meeting at the Royal Hotel, on Friday last, and it was attended by representatives from nearly all the firms in the trade in Wigan, Ince, Hindley, Aspull, St. Helens, Upholland, Penrith, Orrell, and Winstanley. Mr. W. P. Jones, general manager of the collieries belonging to the Earl of Crawford and Balcarres, presided, and the proceedings lasted about an hour. It was unanimously resolved to strictly adhere to the determination come to at the former meeting, namely to close their works at the expiration of their own notices, on the 21st inst. (so far as colliers and drawers were concerned), until the whole of the men returned to their employment. As we stated in our last, the 14 days' notice for an advance of "2d. to the shilling" given by the men to their employers expired at the close of last week; but the miners at some of the largest collieries in the neighbourhood remained at work afterwards, and expressed their intention not to leave until they were turned out at the termination of the counter notice given by the masters, some of which expired on Tuesday and the rest on Wednesday last. This was the case at the collieries of the Earl of Crawford and Balcarres; R.A. Thicknesse, M.P.; Messrs. Banks, Esq.; Messrs. W. H. Branker and Co., Waltham House, Messrs. Blundell and Son, and some others. The resolution agreed to at the meeting on Friday has been carried out by all the firms, whose representatives were present; and there are now from 4000 to 5000 colliers and drawers on strike; but the day-labourers have been kept at work in most of the pits to get coal for the completion of contracts.

A few of the coal proprietors have given the advance. As far as we can learn, the following is a complete list of them:—Strangeways Hall Coal Company; Mr. Jonathan Lamb; Mr. Jno. Part; Mr. Fisher (Bradley Hall); Mr. J. Stephen, and the lessee of the pit recently worked by Mr. R. Preston. The men employed at Norley Hall Colliery, belonging to the executors of the late Mr. J. Daglish, are also at work, the proprietors having offered to give the advance, if the rest of the masters give it. The men at Bishop Colliery, Billings (Messrs. Branker and Co.'s) are still at work, as are all those at the colliery of Mr. S. Stock, Blackleyharts; but these are considered in the St. Helen's district.

The men held a meeting at Aspull on Monday, and another at Penrith on Tuesday. They have also issued a placard, containing what they call a true statement of their grievances. They assert that the advance upon the price of coal since last Nov. "will amount to 12s. 6d. a day of each man's work," and say that their unreasonable demands consist in asking for 1s. 3d. They complain of the system of stopping payment for subs containing dirt, and of their being obliged to wait at times for empty tubs. They contend that the present demand of 2d. to the lb. is a restoration on the history of the metalliferous district of the Choco, and had no reference whatever to the project of an inter-oceanic passage, no obstructions of any kind were met with in the Atlatro to oppose a safe and easy navigation. Mr. Halsey, the surveyor to the New Granada Mining Company, also states, in his report of Nov. 1851, that the Atlatro is the finest river for steam-boats he had ever seen, except the Hudson River, in New York. The whole region, he says, is a mineral district, extremely rich in gold and platinum, and probably silver and copper. Gold, he adds, is found in the beds of all the streams, and every where on the banks. Baron Humboldt and other distinguished geographers corroborate the views of the projector (James Maylestone Haldon, Esq., F.R.G.S.), with reference to his plan of communication between the two seas. The entire length of the cutting in this line of intercourse will be about 18 miles, and the soil is said to be suitable for excavation. Estimates have been prepared, and the result, it is anticipated, will be equal to the advantages of the best commercial enterprises. The company will be constituted under Governmental declaration, and by the Law of the Republic of New Granada, exempting shareholders from liability beyond the amount of their respective subscriptions. The primary capital required for surveys, temporary road, &c., is 1,000,000, which it is proposed to raise in 200,000 shares, to be increased to the estimated amount of permanent capital—2,500,000; but shareholders subscribing to the primary stock will not be obliged to subscribe for the additional stock to complete the permanent capital. The canal will be adapted for the navigation of sailing or steam-vessels of 500 tons each. The undertaking is, unquestionably, one of considerable magnitude, as well as of national importance, and looking at the vast requirements of trade in the East, and the regions in proximity to the Pacific, and the enormous quantities of goods and commodities, the expectation of ample profits from such an investment cannot, we think, be considered unreasonable or chimerical. We understand that the New Granada Government are so well satisfied with the project, that they have given assurances of their cordial co-operation, with every facility and protection required by the company.

## CANAL COMMUNICATION BETWEEN THE ATLANTIC AND PACIFIC OCEANS.

A contract has been concluded with the Government of New Granada for constructing a ship passage up the River Atlatro from the Atlantic to the Pacific. The proposed water-way is from the Gulf of Darien to the Bay of Cupica, in lat. 6° 41' 19" north, on the Pacific. According to the evidence of Capt. Charles Ince, R.N. (who made a survey, and the object of whose explorations was to collect information on the history of the metalliferous district of the Choco, and had no reference whatever to the project of an inter-oceanic passage), no obstructions of any kind were met with in the Atlatro to oppose a safe and easy navigation. Mr. Halsey, the surveyor to the New Granada Mining Company, also states, in his report of Nov. 1851, that the Atlatro is the finest river for steam-boats he had ever seen, except the Hudson River, in New York. The whole region, he says, is a mineral district, extremely rich in gold and platinum, and probably silver and copper. Gold, he adds, is found in the beds of all the streams, and every where on the banks. Baron Humboldt and other distinguished geographers corroborate the views of the projector (James Maylestone Haldon, Esq., F.R.G.S.), with reference to his plan of communication between the two seas. The entire length of the cutting in this line of intercourse will be about 18 miles, and the soil is said to be suitable for excavation. Estimates have been prepared, and the result, it is anticipated, will be equal to the advantages of the best commercial enterprises. The company will be constituted under Governmental declaration, and by the Law of the Republic of New Granada, exempting shareholders from liability beyond the amount of their respective subscriptions. The primary capital required for surveys, temporary road, &c., is 1,000,000, which it is proposed to raise in 200,000 shares, to be increased to the estimated amount of permanent capital—2,500,000; but shareholders subscribing to the primary stock will not be obliged to subscribe for the additional stock to complete the permanent capital. The canal will be adapted for the navigation of sailing or steam-vessels of 500 tons each. The undertaking is, unquestionably, one of considerable magnitude, as well as of national importance, and looking at the vast requirements of trade in the East, and the regions in proximity to the Pacific, and the enormous quantities of goods and commodities, the expectation of ample profits from such an investment cannot, we think, be considered unreasonable or chimerical. We understand that the New Granada Government are so well satisfied with the project, that they have given assurances of their cordial co-operation, with every facility and protection required by the company.

**GREAT POLGOOTH TIN MINE.**—This mine, which has of late been the subject of general remark, in consequence of the disclosures which have been made bearing upon the late management, during which period several dividends were declared out of the funds of the company subscribed for the purpose of developing the mine, is now likely to progress favourably, under the auspices of an influential and very able committee of management. The business of the mine has also been placed in the offices of a gentleman of considerable experience, who was for many years a respected resident in Cornwall. It may not be uninteresting to remark that this sett has been worked for tin from a period far too remote for the earliest record, and the histories of Cornwall have severally given it that notice to which it is entitled from its magnitude and importance. At least, from the time of the requirement of tin by the Phoenicians to the present it has been wrought more or less, with short intermissions, and has yielded a greater quantity of ore than any other tin mine in the county of the same depth. In a geological point of view, it presents some of the most remarkable features known in the science of mining, and has not unfrequently baffled all the known theory and practice of the day; and from this reason, whilst other mines have started into existence at a much more recent period, and have been profitably worked to a great depth, this mine has only yet reached to about the 110. In time past, whenever progressive discoveries have been made, it has been found that the immense dip of the runs of tin eastward have left the various shafts so far behind as either to render them useless, or to increase vastly the expense of working, so that the successive proprietors have contented themselves with realising the speediest and most available profits, and the mine during the last 60 years has not been sunk one single fathom. But the more discoveries are made, aided by the practical results, have shown that all the various "faults" are guided by known laws, and hence difficulties cease by a certain and regular solution of facts. It is, therefore, confidently hoped that the intended application of additional capital, with the view to set forth in the particulars of the adjourned meeting in last week's *Journal*, will not fail to realise those anticipations of success which have been expressed in the report of the mining captains who were lately selected to inspect this very important property.

**EAST BOBORN.**—We understand two of the committee of this mine went to St. Ives during the week, and expressed themselves more than ever satisfied with the appearance of the various lodes. Before leaving they arranged for the purchase of an engine, which the party engaged to erect on the mine within three months from the present time.

It is with regret that we record the death of Mr. John Stoddhorne Brownrigg, who has been governor of the Australian Agricultural Company since 1842, and director since 1829. The deceased was also chairman of the Peel River Land and Mineral Company. His death, we understand, was rather sudden.

## The Mining Market; Prices of Metals, Ores, &amp;c.

METAL MARKET, London, September 23, 1853.

ENGLISH IRON.	per Ton.	On the spot.	per Ton.
Bar and bolt s.	28 0 0	On to arrive.	21 15 22 0 0
In Wales s.	27 0 0		
In Liverpool s.	26 0 0		
In Staffordshire s.	25 0 0		
Sheet, single s.	11 10 0		
" double s.	10 10 0		
" Hoop s.	10 10 0		
" Rod, round s.	10 10 0		
" Rail, square s.	10 10 0		
" Bails (Wales) s.	10 10 0		
" (Staffordshire) s.	10 10 0		
" (Staffordshire) s.	10 10 0		
" Pig, No. 1, Clyde s.	3 3 6		
" 3-1/2 No. 1, 2-1/2 No. 1 s.	3 3 6		
" No. 1, in Wales s.	4 10 0		
" Scotch Pig No. 1 in London s.	4 5 0		
" Stirling's Patent s.	9 0 0		
" Troughed Pig s.	3 12 6		
" Ditto Wales s.	4 0 0		
FOREIGN IRON.			
Swedish s.	11 10 0		
Russian CCND s.	17 0 0		
Indian Charcoal Pig s.	0 0 0		
FOREIGN STEEL.			
Swedish key, nominal s.	16 0 0		
Ditto fagot s.	16 0 0		
ZINC.			
In sheets s.	30 0 0		
Terms: a, 2 1/2 per cent. dis.; b, net; c, 5 ditto; d, 1 1/2 per cent. dis.; e, 2 ditto; f, 1/2 ditto; g, in Liverpool 10s. per ton less;—Discount 5 per cent.			

Delivered in Liverpool 10s. per ton less.

The Metal Market is very healthy, and the legitimate demand for the various articles quoted above is excellent. Scotch Iron has fluctuated during the past week, from 62s. to 65s. The large shipments, both for our own exports and the United States, continue unabated. The Welsh iron masters are availing themselves of this article largely, in consequence of the diminished production of their own furnaces, owing to the uneasiness among the men; and it is now found that a mixture of Scotch improves the quality of the Welsh. The Market leaves off at 63s. 8d. buyers for mixed Nos. (declared).

**STAFFORDSHIRE MANUFACTURERS.**—An official advance of 20s. per ton has been STAFFORDSHIRE PIG IRON.—In consequence of the advance in coal and labour, this article is assuming an upward tendency.

**SWEDISH IRON AND STEEL.**—A demand for France has sprung up; it is stated that the French are buyers in Stettin and Hamburg, at the stock here is diminishing, and also in the Indian Presidencies. It is less than at any previous time during the last three years. COPPER continues in good demand. BANCA TIN—without alteration.

**ENGLISH TIN.**—The expected advance has not taken place, but it is not improbable, the production is decreasing. LEAD is firmer. IN PLATES—No variation from last week.

**GLASGOW, SEPT. 22.**—Since we last had this pleasure, our pig-iron market has exhibited unmistakeable evidence of its healthy condition; for, independent of the bad news from the East, and the advancing price of metal and grain, it has again advanced to 64s. sellers; a large business was done yesterday and to-day at 63s. 9d. prompt cash for store warrants. We close, rather buyers than sellers, at 64s. No. 1, good middling brands, 67s.; No. 2, 62s.; No. 3, 61s.; Gartsherrie, 72s. 6d. Bars have been advanced to 8l. 15s. and 9l., according to specifications, and look very vigorous.

**MINES.**—Mining shares unlike other kinds of stock, have been in good demand this week, and some large buying orders have thrown more activity into the market than we have had to report upon for many weeks.

The mines, generally, are looking well, and there is a fair prospect of an increase in the price of metals, more than corresponding, we hope, with the increase in wages and materials. Lead has already advanced, and many of the miners are getting 1l. to 1l. 10s. per ton more for their ores than they did a month ago. Alfred Consols shares have again risen, and are now quoted at 22l. to 22l. 10s., ex dividend of 16s.; Trevelyan have been in request, at 45l. to 47l.; East Basset, 45l. to 50l.; East Tolguis, 32l. 10s. to 37l. 10s.; Sydney, 8l. 8s. 10s., and 9l.; United, 240l. to 250l.; Eaglebrook, 90l. to 95l.; Trevelyan, 55l.; Great Sheba, 14l.; West Basset, 14l.; Harriett, 10s. to 12s. 6d.; Vale of Towey, 1l. 5s.; North Towey, 15s. to 17l.; Devon Great Consols, 390l. to 400l. At the Herodfoot meeting the accounts showed a profit of 309l., and a statement of assets over liabilities of 1283l. 1s. 3d. A dividend of 512l. or 10s. per share, was declared. As showing the influence of the late fall in lead, it was explained that the ore sold during the last quarter (160 tons) had realised between 4l. and 5l. per ton less than the ore sold the previous quarter; so that the profits were less by nearly 800l. than they would otherwise have been in this quarter. The present rise, however, will enable the miner to realise a much larger profit during the next quarter. At the North Towey meeting a call of 2s. per share was made, to erect a steam-engine immediately. The agent reported that the mine was looking well, and that during the past month 8 tons of lead had been raised from the branch in the shallow adit. In the deep adit, the level had been driven on 5 fms., yielding 1 ton per fm.; the bottom of this level being worth 2 tons per fm. The ore on the mine was estimated at 20 tons.

The total quarterly sales of copper ore, ending with that of the 30th inst., compared with the preceding quarter, show a falling off in quantity of no less than 5949 tons—notwithstanding that of foreign ore there has been an increase of 1645 tons. Of foreign ore the quantity is 10,089 tons, against 8444; and at the ticketings in Cornwall only 42,736 against 50,330 tons. Under such circumstances, our mining friends may reasonably look for a better price for copper ore. In fact, the present high rate of labour, and enhanced price of all mining materials, prove the necessity of their receiving a higher rate for their produce. The miner is, in fact, reaping but slight advantages at present, notwithstanding the apparently high standard for copper ore and black tin. Emigration has been of late on the increase, and labourers are in some districts becoming scarce. We know several mines wherein there is good tribute ground idle, for want of men to work the pitches: this accounts for the quantity of ore being on the decrease.

In the Metal Market, there has been during the week very large transactions.—Lead and Copper are on the advance.—Banca and English Tin in good demand, the stocks reducing very fast, so that higher rates are confidently expected; the same may be said with regard to Tin-Plates and Spelter of the latter, the quantity on hand in England and India is less than it has been for nearly four years.—Staffordshire manufactured Iron has risen 1l. per ton, and Pig-Iron from thence is increased in value, owing to the large demand for it.—Scotch-Pig realises 3l. 3s. 6d. for mixed numbers: the quantity exporting to America still continues to be enormous.

In the Bullion Market,—Mexican and South American dollars, 5s. 0 1/2, per oz. Bar silver containing gold, all gold above 5 grains in the pound to be paid for, 5s. 1 1/2, per ounce standard. Bar silver without gold, 5s. 1 1/2, per oz. standard. Bar gold, 77s. 9d. per oz. standard. Columbian doubloons, 77s. per oz. American eagles, 76s. 5d. per oz.

The arrivals at Swansea include—From Cuba, 1115 tons of copper ore; from Rotterdam, 190 tons of copper ore.

The directors of the Devonshire Great Consolidated Copper Mining Company, at their board meeting, held yesterday, declared a dividend of 8192l., being 8l. per share, out of the profits from sales of copper ore, sampled in the months of May and June last. After payment of the same, there remains in hand a balance of 23,314l. 3s. 11d. in cash, ore bills not at maturity, and reserved fund applicable to the general purposes of the company.

At Wheal Buller meeting, on Tuesday, the accounts for July and August showed—Balance last account (less 1000l. carried to Copper Hill account), 949l. 3s. 2d.; ore sold (less dues), 10,907l. 7s. 11,356l. 10s. 2d.—Mine costs and merchants' bills, 3064l. 2s. 7d.; by dividend of 30l. per share, (7680l.); leaving balance in hand, 1112l. 7s. 7d.

At Trumpton Consols meeting, on Wednesday, the accounts for April, May, and June showed—Balance from last account, 560l. 17s. 6d.; ore sold (less dues), 3952l. 2s. 2d.—4511l. 19s. 7d.—Mine costs and merchants' bills, 2598l. 14s. 6d.; water charge, 100l.; by dividend of 5l. per share (500l.); leaving balance in hand, 1313l. 5s. 1d.

At Wheal Mary Ann meeting, on the 13th inst. (Captain Peter Clymo, jun., in the chair), the accounts for three months ending June showed—Cash, last account, 545l. 15s. 11d.; lead ore sold, May, 1617l. 5s. 4d.; June, 1461l. 8s. 10d.; July, 2362l. 3s. 10d.—5985l. 5s. 11d.—Mine cost, April, 1493l.; May, 1528l. 3s.; June, 1492l. 4s. 1d.; balance for fly-wheel, axle-cage, &c. of steam-whim, 136l. 4s. 9d.; dividend of 1l. 10s. per share, 768l.; leaving balance in favour of shareholders, 567l. 14s. 1d.

The chairman reported that Pollard's shaft was sunk 12 fms. under the 100 fm. level, and that the lode in the 100, south of the shaft, was worth 107 fm. in the same level north it was worth 9l. fm. In the 90 north it was 3l. ft. wide, and worth 13l. fm. in the same level south it was worth 7l. fm. In the 80 south it was worth 16l. fm. in the same level north 6l. fm. In the 70 south it was worth 7l. fm. Clymo's new engine-shaft was sunk 17 fms. from surface. The chairman expressed a hope that, from the present prospects of the mine, they would be in a position to give an increased dividend at the meeting in December next.

At Alfred Consols meeting, on Monday, the accounts for June and July showed—Balance from last account, 1346l. 8s. 10d.; ore sold (less dues), 6324l. 0s. 2d.—7670l. 9s.—Mine costs and merchants' bills, 2126l. 14s. 3d.; two months' water charge, 62l.—By dividend of 16s. per share (4096l.), leaves balance in hand, 1385l. 14s. 9d.

At Herodfoot Mine meeting, held on the 22d inst., the accounts showed a balance of assets over liabilities of 1283l. 1s. 3d. A dividend of 10s. per share was declared, payable forthwith.

At Wheal Edward meeting, yesterday, at Salvador House (T. E. Stubbs, Esq., in the chair), the accounts showed—Mine cost, May, 270l. 7s. 5d.; June, 361l. 18s.; July, 554l. 14s. 9d.; steam-engine (less charge for adit account in December cost, 200l.), 655l.—1648l. 0s. 2d.—Balance last account, 230l. 1s. 10d.; call of 5s. per share, 1024l.; leaving balance against adventurers, 293l. 18s. 4d. Mr. Byron moved that a call be made of 7s. 6d. per share, and did so from the conviction that every shilling would be required to meet the contingencies. He would further remark, that repeated calls were very prejudicial to the interests of any undertaking. Mr. Ennor fully concurred with Mr. Byron, that it would be advantageous to the company to make a call of 7s. 6d., which would not, in his opinion, be more than sufficient to meet the expenses for the next three months, and to carry on the works with spirit. Mr. Ennor was of opinion that a 5s. call would be abundantly sufficient. He had received a report from Capt. Carpenter, who had estimated the costs for the next four months at 600l., which a 5s. call would more than meet. Mr. P. Watson expressed his approval of a 7s. 6d. call. The chairman, on being referred to for his opinion, thought, if the costs would not exceed the sum of 600l., as stated by Mr. Fuller, that a call of 5s. would be sufficient. After some discussion, Mr. Byron consented to withdraw his motion, and it was resolved that a call be made of 5s. per share. Mr. P. Watson suggested that a list of the defaulters be printed and published, and the special meeting be called to dispose of the shares in arrears. Mr. Ennor thought that such a course would be establishing a very bad principle, and would appear invidious. Mr. Byron expressed a similar opinion; the resolution, he thought, should be simply confined to the calling of the special meeting for the forfeiture of shares. Mr. Watson said, he would not press his proposition any further, but would merely add that parties who thought fit to become shareholders ought to be punctual in their payments. A resolution was then passed, that a special general meeting be held on the 2d October, for the purpose of forfeiting all shares on which the call made in June last has not been paid.

At the Birch Allor Mine meeting, on the 21st inst. (G. C. Holroyd, Esq., in the chair), the accounts showed—Balance last account, 44l. 4s. 6d.; arrears of calls, 293l.—337l. 4s. 6d.—Mine cost, June, 135l. 3s. 5d.; July, 162l. 10s. 10d.; merchants' bills, 37l. 10s.; leaving balance in favour of adventurers, 2l. 0s. 2d. A call of 10s. per share was made—5s. to be paid on or before the 1st Oct. and the remaining 5s. on or before the 1st Nov. Captain George R. Odgers reported that the 40 fm. level, north of engine-shaft, had been driven on the course of the lode, which was principally composed of black killas, mixed with mudstone, jack, spots of lead, and antimony. The 30 fm. level south had been driven through, at times, a most promising lode, and the present end was of a very kindly appearance. The engine and machinery were in good working order.

At the Wheal Guskus Mines meeting, yesterday, the accounts for three months ending July, showed—Mine cost, May, 809l. 3s. 2d.; June, 1234l. 14s. 6d.; July, 843l. 19s. 5d.—2781l. 17s. 1d.—Balance last account, 1857l. 16s. 2d.; copper ore sold, 96l. 15s. 2d.; leaving balance against adventurers, 327l. 5s. 9d.; to meet which there are 15 tons of tin, estimated at 75l. per ton, and 30 tons of copper, at 6l. 10s. per ton, making together 1352l.; independent of which, there are large accumulations of tin and copper ores at surface waiting the machinery for dressing, which has just commenced operations. Speedy and large sales will be made. The ore discovered in the back of the levels is reported to be worth 1500l.

At North Basset bi-monthly meeting, on Wednesday (J. Firmstone, Esq., in the chair), the accounts for May and June showed—Balance last account, 2087l. 13s. 10d.; sale of ore, &c., 1809l. 19s. 3d.—3897l. 13s. 1d.—Costs, 1922l. 15s. 7d.; leaving balance to credit of the next account, 1967l. 17s. 6d. The prospects of the mine are greatly improved, as will be seen by the report from Capt. T. Glynville, among our Mining Correspondents.

At East Wheal Reeth meeting, on Tuesday (J. S. Carlin, Esq., in the chair), the accounts showed—Mine cost for July, 40l. 8s. 8d.; August, 40l. 6s. 3d.; merchants' bills, &c., 532l. 15s. 7d.—613l. 10s. 6d.—Balance of last account, 212l. 18s. 6d.; calls received, 138l. 17s.; leaving balance against adventurers, 261l. 17s. It was resolved that the working of the mine should be continued; and the committee of management were directed to take steps for recovering the calls due to meet the cost of developing the mine.

At the Altarnun Consols meeting, on the 17th inst. (W. Waine, Esq., in the chair), the accounts showed a balance against the adventurers of 63l. 14s. 2d. 230 shares were declared absolutely forfeited, unless the instalments or calls due thereon be paid on or before the 1st of October next. Mr. Croft, the late secretary, having made a claim of 60l. against the company, was requested to furnish the full particulars. It was also resolved to refer to Mr. Croft the question of providing a 30-in. cylinder engine, the specification for the construction of the engine and tender to be first forwarded to the committee for their approval.

At Tregeadock Mine meeting, on the 20th inst. (Capt. Sweny, R.N., in the chair), the accounts showed—Balance last account, 184l. 3s. 9d.; mine cost, July, 162l. 10s. 10d.; August, 157l. 15s. 11d.; merchants' bills, March, 33l. 16s. 2d.; April, 48l. 15s. 1d.; May, 44l. 9s. 7d.—631l. 11s. 4d.—Calls received, 369l. 6s.; by sale of ore, 261l. 7s. 6d.; leaving balance against adventurers, 18s. 10d. The balance of liabilities over assets is 169l. 5s. 7d. A call of 10s. per share was made, payable forthwith. Capt. W. Penrose reported that the engine-shaft was down below the 32 fm. level 9 feet 6 in.; the lode in the 32 fm. level was producing 5 cwt. of lead per fm.; last survey day it produced 6 cwt. per fm., and two days afterwards only 2 cwt., the present value.

At Orsedd Mine meeting, on the 19th inst. (James B. Fenwick, Esq., in the chair), the accounts showed—Balance last account, 21l. 4s. 2d.—Mine cost, June, 187l. 15s. 11d.; July, 209l. 8s. 1d.; Aug., 162l. 4s. 10d.; royalty, 4l. 9s. 6d.—575l. 2s. 6d.—Calls received, 339l. 10s. 6d.; by sale of ore, 73l. 13s.; leaving balance against adventurers, 161l. 19s. A call was made of 10s. per share for the payment of the steam-engine now in course of erection. Capt. W. Mitchell, jun., reported that the 20 fm. level from the engine-shaft was commenced with the eastern shaft, since which time all the underground operations, except casing down shaft and putting in footways, had been suspended. The mine is now full of stuff; and the underground operations cannot be resumed until the engine is at work.

At the Devon and Courtenay Consols Mines meeting, on the 13th inst. (E. S. Codd, Esq., in the chair), the accounts showed—Balance last account, 37l. 12s. 4d.; mine cost, July, 187l. 4s.; Aug., 204l. 2s. 2d.; merchants' bills, 208l. 7s. 2d.—637l. 5s. 8d.—Ores sold, June, 95l. 8s. 4d.; call, 488l. 7s. 6d.; leaving balance against the company, 53l. 14s. 10d. A call of 2s. 6d. per share was made. Capt. Thos. Bawden reported that the 40 fm. level cross-cut had been driven south in all about 9 fms., and in which they had cut a lode 3 ft. wide, composed of strong capels, and carrying a small lead in ore. The 30 and east has been driven about 6 fms. east of the cross-course; west, 4 fms.; the lode in this end was disordered. They had commenced sinking a shaft at the bottom of this level, where they had a good course of ore, worth full 45l. per fm. for the length of the winze. The lode appears to be improving as they are going down. Capt. Richard Williams, who had been requested to inspect the mines, reported that in the winze in the bottom of the 30, south of engine-shaft, there was a fine strong lode for about 2 fms. long, worth 30 tons of very good ore per fm. In his opinion, success mainly depends on the discoveries that may be made by driving cross-cuts at the deep levels north and south. They have now on the mine deep and underdred about 24 tons, worth 160l.

At Wheal Mary Great Consols meeting, on the 14th inst. (Capt. Thomas Richards and James Taylor reported that the 50 fm. level had been driven west about 50 fms. on the course of the south copper lode. In the present end of the driving the lode will turn out about 2 1/2 tons of good ore per fm., worth 8l. per ton. Capt. Taylor reports that, judging from present appearances, the lode in the 50 fm. level west will surpass his most sanguine expectations. A horse-whim was in the course of erection at the south engine-shaft. Capt. Richards stated in his report that they could already see enough to warrant their having a good mine when the new engine-shaft had been brought to bear on the deeper levels. The lode in the 25 fm. level was in places large, and showing good stones of ore. A very rich rock of copper ore was placed before the shareholders at the meeting.—[We have since heard that the water has been drawn out, and that the lode at the 50 fms. contains from 2 1/2 to 3 tons of rich copper ore per fathom, for 50 fms. long, worth from 8l. to 10l. per ton.]

At Wheal May meeting, on the 19th inst. (John Luntley, Esq., in the chair), the secretary reported that since the last meeting several calls had been met, and that the committee had thereby been enabled to reduce the company's liabilities. The chairman explained to the meeting the difficulty which presented itself in effecting the sale of the sett, the legal interest in which was vested in Mr. Snell, with whom negotiations for an assignment could not easily be concluded, and, therefore, recommended the sale of the materials, leaving it to the committee to negotiate with Mr. Snell as to relinquishing possession of the mine. The meeting was adjourned to the 3d day of October.

At South Wheal Yealand meeting, on the 19th inst. (the accounts showed



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*[The page contains faint, illegible markings and a dark horizontal band across the bottom.]*



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## Notices to Correspondents.

**NORTH CARADON MINE.**—Sir: Permit me, through the medium of your Journal, to ask why the present managing committee of the North Caradon Mine have not published, or furnished the shareholders with, a financial statement for the time prior to their coming into office.—J. C.: Dame-street, Dublin, Sept. 19.

**AUGUSTA CONSOLS MINE.**—Sir: I have just received a circular, signed by the secretary, informing me (as one of the shareholders) that a resolution was passed at the general quarterly meeting of adventurers making a fresh call; while it appears there are 10 proprietors, holding altogether 640 shares, who refuse to pay past calls, though being constantly threatened with the forfeiture of their shares. In this state of affairs, it appears somewhat extraordinary to me, that such a resolution as the following should have been passed at the said meeting (comprising A. C. Duncan, M.D., in the chair; Messrs. A. Stewart, J. C. Todd, G. Mackay, Major R. R. Hughes, C. J. Wicker, C. T. Christian, J. C. Todd, and Capt. Jas. Carpenter):—"That the following gentlemen be the committee of management for the next three months, and that 2s. 6d. per month be allowed for such attendance—viz., Messrs. A. C. Duncan, G. Mackay, C. J. Wicker, J. C. Todd, and Major R. R. Hughes;" so that, with the exception of A. Stewart and C. T. Christian, all who attended the quarterly meeting are to form a paid committee. Now, would it not have been more satisfactory to the out-adventurers had the parties communicated their intentions previously, and to have obtained the shareholders' opinions thereon? More exertion should certainly have been used to obtain payment from the defaulters before making any such call; we might then have had more confidence in their powers and management, and, probably, should not have objected to their being paid.—AN ADVENTURER.

**Sir.**—Can any of your readers inform me where the offices of the Australian Freehold and Lake Bathurst Mining Companies are; and if those companies are at present in statu quo, or in active operation in the colony?—MERITOR: Manchester, Sept. 14.

**MR. CRADDOCK'S STEAM-ENGINE.**—Sir: I am glad to perceive, by a letter from Capt. Bennett, of Haytor Mine, Newton, Devon, in your Journal of last week, that one of Mr. Thomas Craddock's steam-engines is to be placed on that mine. This step is like the thin end of the wedge, which, it is to be hoped, will not end without splitting up the old interests, and showing us a new order of things. It is a matter of joy, to know some persons were acute enough to adopt them previously, as I noticed you remarked in a paper some time since was the case; but the fact coming near to one's own door, brings stronger personal faith in the realisation, and which is to be hoped will soon evolve itself into a great fact. Its application to a mine may, perhaps, be novel; but from what has been stated, it will effect a very great influence, as far as economy is concerned—a fact not to be disregarded by those who feel interested in economical mines. I have also been informed of another mining company who are likely to employ these engines. There appears, therefore, great reason for believing that Mr. Mushet's labours are effecting good, by having drawn the attention of parties to the subject.—A. S. K.: Sept. 20.

**Sir.**—I am informed that an important discovery of silver-lead ore, value £500, per ton, has been made in the neighbourhood of St. Teath and Endylin, in Cornwall; the finders of which have covered up the hole and built over it, and now ask £30,000 for the sett. If any of your readers can give further information as to the fact, it will oblige your occasional correspondent.—BENVOULT: London, Sept. 22.

**GREAT CAMBRIAN MINING AND QUARRYING COMPANY.**—Sir: Although it may not be usual for a secretary to notice the anonymous correspondence of a public Journal, still in this instance I break through the rule, in order that "A Shareholder," who rather prematurely asks in your last week's Journal whether "the directors of this company have discovered gold, or any traces of it, on their property," should not take silence as a negative reply to his question. It is my pleasurable duty to say that gold has been discovered upon the company's property, and that, too, from surface samples. The Great Cambrian grant adjoins that of the Prince of Wales Mine, in which the great discovery of gold has recently been made; and there cannot exist a shadow of doubt, when the lode which passes through our grounds shall have been opened upon, which it is our intention immediately to do, the same richness in the precious metal will be found. I have, further, the happiness to inform "Shareholder" that, as regards the silver-lead, &c., the mines are daily improving in richness and value, and will beyond all doubt shortly become extremely remunerative.—OWEN BOWEN: Threadneedle-street, Sept. 22.

**MINING IN JAMAICA.**—A Cornish Miner should send such a statement for publication as he can attach his name to, as a guarantee to those whom he wishes to caution of his good faith and sincerity. Much interest is felt in the several properties at Port Royal, St. George's, and Portland; and authentic information respecting their productiveness from a competent party would be much valued by all concerned as proprietors.

**"V. L." (Broad-street).**—There appears to be a fatality attached to the localities mining company, established there for some years, is now dissolved under most disastrous circumstances; an emigration company was attempted subsequently, but most signally failed. The bi-monthly meetings were advertised; they have however been private, and the company never in very good odour.

**"Alpha" (Swaffham).** should cause some friend in London to make the enquiry: we cannot give the information.

**"R. F." (On reference to a map of the world, it will be found that our statement in the Mining Journal of the 3d inst., that the Panama route will bring New Zealand 1200 miles nearer than any of the Australian ports, is by no means an exaggeration. Port Jackson, the nearest, for instance, is about 150° east longitude, while Auckland is 175°, giving a difference of 25° on the 30th parallel of south latitude. Taking the average of the Australian coast, the difference north and south is immaterial. With respect to the advantages of Milford Haven as a port, it has always been considered unsurpassed for safety, depth of water, entrance and exit at all times of tide; and, with respect to Liverpool, has the start on the Panama route by some 200 miles.**

**WEST WHEAL JANET.**—Sir: I shall feel obliged if you will correct an error in the report of this mine, which appears in your paper of the 10th inst. It is there stated that the tin ground laid open is 20 fms. in length, 15 fms. high, and 15 fms. wide; it should have been, 25 fms. in length, 15 fms. high, and 3 fms. wide.—J. TREXNHERE.

**COCHRAN'S CRUSHING MACHINE.**—Sir: In your Journal of last week I perceived a testimonial from Captain Verran on the beneficial capabilities of this invention, wherein he thus states, in introducing and recommending it to his mining friends:—"I am unhesitatingly recommending your machine to my mining friends, as the most perfect and economical that has been introduced to the public, and many mines unproductive heretofore can now be made productive by using it." Now, Sir, having some very poor and unproductive mines, I should be glad to have Capt. Verran's statement corroborated. Could not the patentee have a machine erected where its powers could be tested by practical application? If found effective, its extensive use would immediately follow, as the great advantage it presents to the mineowner would compel its general adoption.—A MINER: Exeter, Sept. 21.

**"W." (Westminster).**—The mine alluded to was the Kildrum Lead Mine, and the association the Mining Company of Ireland.

**"G." (Birmingham).**—There has been for some time a division between some of the shareholders and the directors of the Australian Consols Gold and Copper Mining Company. A meeting of the dissentient shareholders was held at the London Tavern (Mr. Vanisart in the chair); this was attended by Lord Keane and several influential parties. Mr. Chandler, the solicitor of the company, was also present. We have heard a compromise was entered into, but from the difficulty of obtaining any information at the office, we are unable to state whether this be the case or not. Mr. Chandler will, no doubt, be able to afford the required information.

**SHARE-DEALING ILLUSTRATED.**—We cannot publish the letters from "Censor Varrum." The "respectable position" so long occupied by one of the parties is referred to, would point him out as a fit medium through whom the matter can be better arranged than by publishing such correspondence. We think there must be some misunderstanding, and which we hope to find satisfactorily rectified on explanation.

**"G. H." (Mansfield).**—We do not think that in the present conjuncture of affairs it would be advisable to usher into public notice a company, where interests of such general utility and so much magnitude are involved.

**"Tyro" (Liverpool).**—One of the methods of assaying for silver from copper is:—Copper ore, 400 grains; litharge, 600 grains; fluor-spar, lime, borax, of each a moderate ladle; tartar and nitre, a good ladleful of each, and about an ounce of iron nails, in order that the sulphur found in copper ores may attach itself to it. The poorer the ore, or more properly, the greater quantity of sulphur and copper the ore contains, the more lead or litharge is required: after the button is obtained, test in the usual way.

**TRUTH AND SCIENCE REVEALED BY GEOLOGY.**—The communication from Barnstaple, signed by George Guard, John Thorne, John Green, and John Hedger, is not adapted for publication in our Journal.

**WHEAL MONTAGUE, IN TOWNSHACK.**—Sir: My attention has only recently been drawn to a letter in your correspondent column of the 27th inst. from "S. N. C. Redruth," about this mine, which really contains an assertion that requires to be borne out. "This concern has popped from no one can tell where." Strong language that. Who and what is "S. N. C.?" Does he know all things? For really after reading this one would fancy he was some mighty and wise person, so dogmatically do the words sound. Has he ever been west of Redruth? I question if he has, for if he had been within the last 12 months, and took the trouble to enquire, I fancy he might have learned that this Wheal Montague is not (thankbe) his Montague; but supposing he has not done so, even if I can tell him that the tin mine called Wheal Montague is situated in the parish of Townack, near the parish church, about half a mile north-west of Wheal Beeth and Keeth Consols, and very near the old Rosewell Hill Mines, all of which have produced tin in sufficient quantities to prove what the locality is, and are too well known and have given such profits as to require no comment from my pen. I can also tell him that the "promoters" are generally of the highest respectability, including Edwin Ley, Esq., and J. N. R. Millett, Esq., of Penzance, N. Harvey, Esq., Hayle, &c.; that the mine is being worked in a legitimate manner as a legitimate spec.; that there is a new 30-inch cylinder pumping and stamping engine now at work; that being now only 20 fms. deep they have saved some tons of tin and ore, and are now nearly, if not altogether, paying cost on the one lode, to which as yet all the operations have been confined; but there are several other parallel ones within a few fathoms of it, equally promising; and that altogether the mine is regarded by parties who do know it as one of the most promising, quiet, legitimate spec. in the west. By the bye, a little news about his real Wheal Montague would not be taken amiss. Where has that "popped from?"—NIMIS: Penzance, Sept. 19.

**"H. G. C. C." (Berwick-on-Tweed).**—The party to whom the fee of 3l. 3s. should be offered is any respectable mine agent or captain residing in the locality of the mine wished by our correspondent to be inspected.

**COPPER MIXES.**—Sir: Having returned thus far from a tour through the mining districts of Devon and Cornwall, I find, during the past year, a very considerable falling off in the quantity of copper ores from several large mines; in fact, many of the most extensive are now yielding comparatively small returns to what they did some year or two ago—such as the United Mines, Tresavean, Great Consols, Tretwell, Wheal Brewer, East Wheal Crofty, Carr Breca, Cook's Kitchen, Tincroft, East Pool, Wheal Seton, North Roskear, Dolcoath, Wheal Trengwyn, and other mines in that district. The Levant Mine is making small returns of copper ore to what it did a few years since. We are told that we must not expect much copper from Australia for the future. From whence are we to be supplied, unless some of the new undertakings turn up like some of the once celebrated mines which I have named? It is true I heard of several very promising young mines throughout the county of Cornwall, more particularly in the neighbourhood of Marazion, which district, I understand, formerly stood pre-eminent for its tin and copper mines, and it is to be hoped, before long, will again become the hive of industry. We must also look to the old-wrought movement in the sister country.—W. McLEOD: Devonport, Sept. 22.

**"R. W." (Worthing).**—The arguments respecting the railway passing near to Worthing appear very convincing, and the reasons sound; but the writer should have been less free with epithets.

**IRON SMELTING.**—Sir: Can any of your esteemed correspondents inform me if, at the present time, calcined lime, instead of the raw limestone, is anywhere being used in the smelting of pig-iron? If so, is it being worked to any advantage? And is there any saving in fuel by working it in its calcined state.—A FURNACE MANAGER: Walsall, Sept. 22.

**MIXED HEAD MINING COMPANY.**—Sir: If your correspondent, who signs himself "A Shareholder," is really what he pretends to be, he might have had the information which he seeks through you by a very much more simple course—viz., by applying at the office, either personally or by letter. If he is a shareholder, he would be entitled to see the rules of the cost-book, and by taking that trouble he would be able to inform himself why a fee is charged for transferring shares in this company from one person to another.—JOHN MADDEX, Sec.: Hatton-court, Threadneedle-street, Sept. 23.

**"Mr. Crofts, in last week's Journal, proposed to adopt the plan of giving quotations of the value of such shares as were offering at the very low rates lately and now prevailing, and yet worth attention as investments, but he finds, on approaching the question to deal practically with it, that it is beset with difficulties, since over a diffused market it is next to impossible to obtain a close price, whilst an incorrect one is no value. Mr. Crofts, therefore, contents himself with reiterating the opinion that the present is a safe moment to speculate in certain depressed shares, and has given a copious list of such in his usual advertisement."**

**"H. L." (Plymouth).**—We have mislaid the address: our correspondent must, therefore, communicate through the Journal.

**"A Shareholder" (Leeds).**—The last report of Sir Henry Huntley stated that the erection of machinery was progressing favourably, and probably by this time is now in active operation. The difficulties the superintendents have had to encounter from climatic influences cannot be fairly judged in England. The same remarks may be applied to the Agua Fria Company. A solution of the question must soon be arrived at; and from all accounts we receive of the progress of the accredited descriptions, this will be satisfactory.

THE MINING JOURNAL  
Railway and Commercial Gazette.

LONDON, SEPTEMBER 24, 1853.

An official document of some interest has just been presented to the public—the Report, for the year 1852, of the Rev. J. P. NORRIS, her Majesty's Inspector of Schools, addressed to the Committee of Council on Education, referring to the educational state of the coal and iron mining districts of North Staffordshire. Although the report, on the face of it, purports to relate to the education of the children, its observations are extended to the moral and social condition of the population generally; and the views and opinions of the reverend functionary of the Government are entitled to marked consideration at this period, when the disposition to enter into combinations, by intimidation to interfere with the rights of property, and by "strikes" to impede the current of commercial prosperity, is, unfortunately, so prevalent and so alarming. It appears that an association had been formed amongst the iron and coalmasters of that district for the establishment and distribution of annual prizes in the national schools connected with the mining population; and that Mr. NORRIS, irrespective of his official character, was selected to conduct the examinations. We confess we were scarcely prepared for the startling announcement he now makes, "that a very large majority of the children of this district go to no school at all, and that of those who attend the national schools, the general practice is to enter the school at seven years old, attend about three or four days in the week, and then leave. Need we wonder," very naturally enquires Mr. NORRIS, "that many of the iron and coalmasters complain that they see little or no good resulting from our national schools? Nay, I will go further," he observes, "and venture to enquire whether such schooling is not in many cases doing more harm than good? To talk of training the character of a child by giving him twelve or fifteen months of desultory schooling before he is ten years of age, is a cruel mockery."—"You have taught him to read, that he may drink in the poison of a seditious press,—you have taught him to write, that he may one day sign his name in a prison register, to the scandal of education."

These are lamentable disclosures as to the prospects of the rising generation, in a moral and social view; but we must learn from Mr. NORRIS what examples the children have at home in the adult population of the mining districts. The Inspector states his experience of their habits to be extensive; that he has visited the colliers and iron-workers both at their homes and at their work, whether at the pits or at the forges; and their distinctive character may be summed up in one word—improvidence is too tame—it is recklessness: both young and old, men and women, married and unmarried, are uniformly and almost avowedly self-indulgent spendthrifts. This reckless character, he asserts, mars and vitiates the nobler traits of nature; their gallantry in the face of danger is akin to foolhardiness; their power of intense labour, seldom exerted except to compensate for time lost in idleness; their readiness to make "gatherings" for sick and maimed comrades, only to obviate the necessity of previous saving.

The prodigality of the reckoning night, the drunkenness of the Sunday, the refusal to work on Monday, perhaps on Tuesday, the wretchedness of their homes and families in the period intervening before the next payday, their wives and daughters on the pit-bank, their furniture in the pawn-shop—such a state of things co-existing, with earnings which might ensure comfort and prosperity, seem to Mr. NORRIS to prove that no legislation can cure it. "The whole character of the people," he insists, "must be changed; they must be taught, early in life, habits of forecast and self-control; the remedy is to be sought in the improvement of the home and of the school." Mr. NORRIS refers to and concurs with the results of the evidence which Mr. TREXNHERE, in his Report to the SECRETARY OF STATE, in 1850, had multiplied from all parts of the country, showing that the increase of immorality was concurrent with the increase of wages; that the obstinate refusal of the men to earn more than two-thirds of their fair power of work, by which the cost of production is largely enhanced, capital crippled, and the public mulcted, is due to the same cause; that the readiness to become the prey of unionists and agitators is traceable to their want of the most elementary principles of thought, and that most of the accidents, which are of weekly occurrence, are occasioned by their own obstinacy and ignorance. He concludes, however, with one consolatory assurance, that "wherever they have advanced in intelligence, they have invariably become more skilful, more subordinate, and more industrious."

"These facts," observes Mr. NORRIS, "have convinced the more thoughtful and far-sighted masters of South Staffordshire that the only sure means of maintaining their ground under increasing foreign competition, and averting a social crisis, is to reform the character of the rising generation of operatives by education." The national system had brought its schools to the poor man's door, and the plan of distributing prizes, if seriously and liberally persevered in, must ultimately tend to attract and attach the children to them.

It is not, however, sufficient for the masters to devote their attention to the mental training of the children only; the providing of comforts for those they employ is one of the duties of property, and it is never too late to arouse the class on whom those duties devolve to the performance of them. The enjoyment of comforts by men and their families is the most certain means of encouraging the taste for them in both, and that taste the safest and surest corrective of that recklessness of which we so justly complain. The first step is to improve the dwellings of the coal miners, so as to supply to every family what may be fairly deemed a home. We could never understand on what principle of justice proprietors could consider themselves at liberty to make distinctions in the state of dwellings, of which they are so often ostentatious, for their land labourers, and the houses they devote to their labourers underground, a class in general far more emolumentary to them. The alarming conflicts now prevalent throughout the country between the employers and the employed, must

satisfy the proprietors of large establishments that they never can be secure from the consequences impending over them, until the mutual relations between capital and labour shall be satisfactorily adjusted. The masters of extensive collieries must themselves feel that they too seldom come in direct communication with those who do their work. The arrangements are frequently committed to overseers or contractors, the former of whom are too well-disposed to treat the men as mere machines, who are to be made use of for the purpose of producing a given quantity of work; the latter hire the pits to raise as much as they can at the lowest wages; and by both the real operatives have been too long taught to look upon their true masters as tyrannical autocrats. The colliery population ought to be disabused by kindly and considerate treatment; by referring to their former degraded condition, and by reminding them of the improvements which have been effected, a consciousness should be created in their minds, that the spirit and policy of the age are anxious for their social advancement, and only require their own co-operation to effect it.

In former days the colliers passed from owner to owner with the properties on which they were located: even in the boasted Habeas Corpus Act, it was expressly declared "that this present Act is no ways to be extended to colliers." By an Act of the British Parliament in 1775, it was first provided that colliers shall be no longer transferable with the collieries; they were, however, not completely liberated until the Act of 1799. To the early state of the law might, perhaps, have been traced their long demoralization, and modern legislation by the Act of the 5 and 6 Vic. c. 99, removed from the coal proprietors the reproach which attached upon them, from the employment of women and children in collieries. The noble author of the Mines and Collieries Bill of 1842, has seen every obstacle that was anticipated vanish, every difficulty that was predicted disappear, and benevolence was never more successful than in the legislative triumph which will remain for ever associated with the name of Lord SHAFTESBURY. Much, however, yet remains to be effected; and while we deplore the fallacious and short-sighted views of the men, and feel the injurious consequences of those extensive ramifications of a system to which they are so fatally attached; we are assured that the antidote is in the hands of the masters, and can be best administered by rendering their operatives educated, and calmly remonstrating with them, as beings endowed with reason. A wise but conciliatory policy will easily but effectually teach them that they are the arbiters of their own fate, that a perseverance in senseless follies will only tend ultimately to their ruin, by creating and encouraging foreign competition, and thereby closing against the manufactures of England the markets of the world.

The legal effect of a notice of relinquishment of claims by an adventurer, in respect of shares in a mining company, conducted upon the Cost-book Principle, has lately been laid down by the Lords Justices in the case of the PENNANT AND CRAIGWEN CONSOLIDATED LEAD MINING COMPANY *ex parte* FENN (see 22 Law Journal, N. S., Chan. 692). This company was formed on the Cost-book Principle, although the mine was situated in Wales. The cost-book, as usual, contained the rules of the association, and the twenty-fourth empowered shareholders to determine their liabilities, by giving notice to the pursuer of their desire to retire from the concern, and depositing with him a transfer of their shares, and signing a relinquishment of their claims upon the company in respect of the shares held by them. The Rev. Mr. FENN, having shares in the association (the calls upon which he had duly paid up), heard that more money would be required to work the mine, and on the 4th Sept. 1851, signed a form of relinquishment of his shares and claims upon the company, which had been furnished to him from the office of the company, and was in the following terms:—"I beg to inform you it is my desire to retire from the Pennant and Craigwen Consolidated Lead Mining Company, and I hereby relinquish all right or title to the parts and shares standing in my name in the cost-book of the company." The affairs of the association were ordered to be wound up on the 14th Sept. 1851, when the debts were found to amount to 1730*l.* and upwards for rent, wages due to miners, &c. The name of Mr. FENN having been placed upon the list of contributories by the official manager, the Master, to whom the winding-up order was directed (notwithstanding objections urged on the part of Mr. FENN), retained his name upon the list. The case subsequently came before Vice-Chancellor STUART, who held that what Mr. FENN had done amounted to a relinquishment, according to the twenty-fourth rule in the cost-book. From this decision, the official manager appealed to the Lords Justices, who discharged the Vice-Chancellor's order, upon the ground that the evidence before the court was not clear and satisfactory, but gave leave to the parties to go before the Master *de novo*. This was done, and the Master (Mr. TISNEY) again added Mr. FENN's name to the list of contributories, who thereupon appealed to the Lords Justices direct, by special leave granted for that purpose.

For the appellant, it was contended that his letter of the 4th Sept. was a complete relinquishment of all his interest in the mine, and was a full compliance, not only with the twenty-fourth rule contained in the cost-book, but was also in the form which the company had up to that time themselves adopted. On the part of the respondent, it was urged that there were three things required to be done by the twenty-fourth rule in the cost-book, to make the relinquishment complete.—1. A notice in writing to the pursuer.—2. A deposit with him of a transfer of the shares.—and 3. A relinquishment of all claims upon the company. Of these three requirements, it was contended that Mr. FENN had only observed the last, and that he was, therefore, only released from future debts, but that he remained liable to all those subsisting at the date of his letter, particularly for the arrears of rent due under the mining lease. The Lords Justices, however, held that the letter of Mr. FENN was a substantial compliance with the cost-book regulation, and a complete abandonment of all his rights in the mine, and that by it he had relieved himself from all liability in respect of his shares, and removed his name from the list of contributories, ordering all his costs in the controversy to be paid out of the estate.

The principle involved in this case is of very great moment with reference to the cost-book customs. It is clear that Mr. FENN was under no contract, except that contained in the cost-book regulations. They were the foundation of his property and of his liabilities. In form as well as in substance he had complied with the requirements of the twenty-fourth rule, and having done so had, beyond question, in the very words of the rule itself, "determined his liability with respect to the affairs of the mine."

Those in the habit of reading the MINING JOURNAL cannot have failed to notice the gradual drooping tendency which during the last three months has been observable in all species of stock; but in no investment has this been so remarkable as in gold mining shares, and yet these are at all intents and purposes equally as valuable as they were at the formation of the several companies. In making these comments we do not allude to the many bubbles which were concocted immediately after the discoveries of gold in California and Australia, nor to the numberless abortive schemes resorted to by fraudulent individuals to delude the public. Some of these chimeras are already dissolved, or the promoters have silently, and without beat of drum, levanted, and left their unfortunate shareholders (minus their cash) to discover their *locus in quo*. It is not on these discreditable associations, or the parties connected with them, that we shall make any remarks; we leave them to that scorn and contempt which they so justly merit. It is true, that owing to the complicated state of the political horizon, and the fears of a bad harvest, that a gloom has been cast on all species of adventure, and gold mines have, consequently, sympathised with other departments of the Stock Exchange; yet it must be borne in mind, while all other descriptions have been only correspondingly affected, these have been depreciated almost to a minimum rate. It would be as well to ascertain what are the primary and principal causes which have led to this deplorable state of affairs. We have shown that it is not to be solely attributed to the present dulness of the market; we are of opinion that in the constitution of most of these companies there was something inherently bad. As yet no positive result has been arrived at as to the profit of gold quartz-crushing; and the unaccountable delays and excuses put forward by the agents from time to time, have in some measure tried the patience of the shareholders, who find that after the capital has been subscribed for two years, apparently they are as far from the goal of their expectation as ever. If property in the accredited gold companies was at a certain value twelve months since, machinery has in the intervening period been erected on it, quartz raised from the mine in the meanwhile, it would seem that it should correspondingly increase in value, instead of being, at it is now, at a fearful discount. We will take the case of one of the accredited Australian companies: this has the whole of the capital subscribed, has not commenced working, consequently but little has been expended, yet the shares are at half discount, when, in all probability, if the company were wound-up to-morrow, nearly all the deposit would be returned to the proprietary. One



of the greatest blows to the Australian adventures was given by the suicidal course of the AUSTRALIAN GOLD MINING COMPANY. The direction of this was principally composed of gentlemen connected with the colony, and supposed to understand all its capabilities and requirements; yet not finding their superintendent energetic enough, instead of vigorously prosecuting operations, they determined to watch the course of events, and see what other companies were doing; while there is every probability, from the active exertions of the respective superintendents of the COLONIAL GOLD and PORT PHILIP COMPANIES, they will before long take the lead in mining operations.

In our opinion the great error was committed by the formation of too many companies both for California and Australia immediately after the gold discoveries took place. Persons without name, standing, or character, placed themselves at the head of a number of dubious adventures, obtained some capital from the gullible portion of the public, pretended to send out assayers, to obtain locations, &c., and then, as soon as the money was expended, dissolved the company, or vanished. The return of positive results will do much to give the public confidence in gold mining; but in order that this may be strengthened, it is to be hoped that several of the projects now in existence should be swept away, leaving only the more respectable and accredited descriptions. We do not wish invidiously to point out those which are in bad odour; their shares are now worthless, and while they are in the market tend to depress others; what we should advise is, that those who are concerned in the *bona fide* gold mining companies should not allow themselves to be alarmed by a *quasi* panic, but await the arrival of decided information from the scene of operations.

We observe that Mr. NEISON, the well-known actuary, has read a paper at the British Association on Railway Accidents; and the facts he has collected and classified are not only highly interesting, but, we believe, will be found, in some cases, to alter the opinions generally entertained. It appears, to the credit of much-abused directors, be it spoken, that accidents from causes under the control of the companies are decreasing in proportion to the miles travelled; and further, that the largest proportion of accidents have occurred to first-class passengers: this doubtless arises from the fact that the fast trains are the most exposed to casualties, and by them a larger proportion of first-class passengers usually travel. Statisticians, like Mr. NEISON, confer a great boon upon society in grouping dry facts, so as to enable the acting managers and others interested in railways to form their conclusions on sound data, instead of vague impressions. We have long carefully watched the various alterations in railway construction and management, together with the speeds of the trains, and the effect of heavy engines and high velocities upon that costly part of construction, the "permanent way," which, in many instances, sadly belies its name, by proving anything but permanent; but with dividends at a low ebb, it requires courage in a board of directors to adopt any improvement causing further outlay, let the future benefit be ever so clearly proved. The state of many of our railways is becoming most serious, from the decay and wear of sleepers and fastenings, and the lamination of rails, all, of course, accelerated by the high speeds induced by the demands of the public, and the enormous weights of engines and trains. We know that many boards of directors (we hope all) are most anxious to arrest the growing evil, which so grievously diminishes dividends, and causes long faces at half-yearly meetings. We are naturally led to these remarks by the occurrence of the meetings referred to. At the same time, we would call attention to the fact that the Eastern Counties line, once the bye word for bad management, expensively conducted, has, for several half-years, wiped off the stigma, and in cost of permanent way has become a model; for instance, the total cost for labour in maintaining the permanent way was, by the last account, under 30*l.* per mile for the half-year. It was upon this line that a plan of uniting the rails firmly, so as practically to make them a continuous bar, was first fairly tried under a heavy traffic; and, sanguine as inventors proverbially are, the results have exceeded their expectations. The plan consists in bolting strong pieces of iron to the side of the rails at the joints; the term "fish-jointing" has been given it, from the similarity of the operation to "fishing" a spar at sea. Another mode of obtaining the same object was adopted and patented by Mr. Samuel, when engineer to the Eastern Counties line, which consists in making the casting of the joint-chair form one part of the fish, whilst the ends of the rails rest upon the chair; both modes are effectual, but there are varying circumstances in existing railways rendering either more applicable to particular cases than the other; this we may leave to the engineers, but our present concern is with the results.

The most unobtrusive traveller must be struck with the great change in his comfort, and ability to make his fellow passenger hear, that takes place instantly on some lines. A rattling noise and rocking motion is succeeded by comparative quiet and smoothness: this is the effect of fish jointing; and did the benefit end here, the public would be disposed to wish all lines so altered, but the shareholders might fairly demur on account of the cost; fortunately, however, the latter have fully as great an interest in it as the former, for it is productive of great economy, and reduces the cost of the labour for maintaining the road at least some 30 per cent. It is obvious, too, that if the wheels, instead of encountering an uneven joint at every 15 or 16 ft., producing that annoying clicking noise which every one hears, but few know the reason of, pass silently on from one length of the bar to the other, as if they were perfectly continuous, the force required to draw the train is decreased, and also the wear and tear of every part of the rolling stock. Great as these advantages are, there is one in addition that is even more important, as it annihilates one fruitful source of danger, *bad joints*, to which some of the most fearfully fatal accidents have been traced. Like most other inventions of utility, this fish-jointing is patented, and is the property of some gentlemen, all experienced engineers, associated under the title of the PERMANENT WAY COMPANY, and possessing many other patented inventions, chiefly the result of their own experience. The results obtained upon the Eastern Counties line attracted the attention of the directors of the London and North-Western and Midland Counties Railways, and a careful investigation was instituted, which we understand resulted in these two great companies securing the right to use the invention over the whole of their lines. The cost of its application to old lines we are told is between 200*l.* and 300*l.* per mile, including patent right, for which a saving of from 30*l.* to 40*l.* or even 50*l.* per mile in the labour of maintenance may be calculated upon, besides the fact that the rails will last from 20 to 30 per cent. longer. The policy of granting patents for inventions has been much canvassed, and high authorities are ranged on opposite sides of the question. Certain it is that engineers are often stopped in the adoption of the best means adapted to their purpose by requiring the use of several patents, and the necessity of arranging with several patentees. We have heard of more than a dozen patents being combined in a single railway carriage; there is, therefore, an obvious advantage to the public when a large number of patents, relating to one branch of construction, are possessed by one body, and can be negotiated for in a lump. Inasmuch, then, as we like to travel easily, to talk on the journey, or sleep, as the case may be, comfortably, and arrive at the end of our journey safely, with the conviction that shareholders may get good returns out of moderate fares, we wish all success to "fish jointing."

The improvements in extracting gold and silver from their ores, recently patented by Mr. ISHAM BAGGS, having now been adopted by some of the leading companies in America, Australia, and Europe, we are induced to offer to our readers for the second time a detailed account of the invention—the more so in consequence of numerous enquiries which are continually being made at our office as to the nature and advantages of this new system of extraction. Referring to the particulars contained in another column, it will be found that the inventor, steering clear of all theoretical ideas, however promising they might appear, and confining himself entirely to those principles which have been thoroughly established, and generally practised for a series of years throughout the known world, has aimed at the production of a system which should combine all present certainties and advantages inherent in the existing mode of working; while it should, at the same time, remedy those concomitant defects which, though they have long been apparent, have not hitherto been removed. It is a desideratum in every chemical operation, and more especially in that of extracting gold and silver from their ores and matrices by means of mercury, to ensure and maintain the greatest extent of acting surface between the dissimilar and attracting particles. In the mercurial apparatus at present employed great difficulty is experienced in effecting this object, from the strong tendency of the disseminated particles of mercury to unite into larger globules. In the improvements now under consideration the desired result is obtained by means of what are aptly termed mercurial sieves. These sieves are prepared in the following manner:—Parallel wires of copper wire-gauze, fitted to the interior of a barrel, are dipped into a solution of nitrate of mercury, whereby, in accordance with

well-known laws, the whole surface of the gauze becomes covered with a strongly adherent surface of quicksilver. It will readily be understood that when such a barrel as we speak of, with a capacity of some 60 gallons, and supplied with 16 or 18 of these sieves, is charged with finely-powdered quartz and loose mercury, and caused to revolve, every particle of the quartz and of the mercury must of necessity be brought into repeated and continual contact with the meshes of the sieves—the former material yielding its particles of gold to the attraction of the mercury, and the latter continually supplying by percolation a renewed surface of action. It is calculated that under this arrangement the materials contained in the barrel are at every revolution brought into close and intimate contact with no less than sixteen thousand square feet of mercurialised surface; and as friction is at the same time ensured by a quick and continued lateral motion of the barrel to and fro, the particles do not only fall through the interstices of the sieves, but are being struck incessantly against the wires which compose them, so that it is next to impossible for a particle of gold to escape.

A second improvement of the patentee consists in an apparatus for effecting the speedy separation of the amalgam from the refuse when the process of combination is complete. It consists simply of a kind of hopper, containing, as in the former instance, a series of mercurialised sieves, which are here, however, stationary, and considerably inclined to the horizon. The mixture of amalgam and refuse is allowed to flow through these sieves—the refuse being unattracted passes through to waste, while the mercury is retained by the force of cohesive attraction, and as it accumulates follows the inclination of the wires, in obedience to the force of gravity, and is thus conducted to the bottom of a cup placed beneath, where it collects in a mass for the after process of distillation. As the article already referred to will supply our readers with more explicit details, we shall now simply content ourselves with once more calling the attention of those who are interested in gold mining to this (as it appears to us) very important improvement upon the present system of extraction, and, in doing so, we hope that the great saving of time, labour, and materials, which the invention professes to effect, will lead those who have hitherto been inactive upon the subject to investigate its capabilities.

#### SALES OF COPPER ORES.

COPPER ORE SOLD AT SWANSEA TICKETINGS, FOR THE QUARTER ENDING 29th SEPTEMBER, 1853.

FOREIGN ORES.		
Mines.	Tons.	Amount.
Cobre	2351	£41,827 6 0
Cuba	1370	20,170 13 0
Santiago	406	8,356 2 6
Montreal	237	3,421 8 6
Kapunda	155	3,243 1 6
Malaga	547	2,148 8 0
Spainish	327	32,060 5 0
Coplopo	96	1,871 15 0
Burra Burra	100	1,572 6 0
African	30	1,042 6 0
New Zealand	74	1,041 11 0
Algiers	10	959 10 0
Australian	30	707 10 0
Carthage	71	591 14 0
Garrucha	48	445 4 0
Baltimore	97	302 9 0
Peninsular	30	238 4 0
Kaw-aw	5	203 8 0
Gibraltar	38	83 12 0
Total	6178	£90,288 13 6

IRISH.		
Mines.	Tons.	Amount.
Berehaven	204	£18,551 10 6
Knockmahon	966	9,098 4 6
Holyfort	100	2,006 8 0
Ballyvaughan	30	1,303 15 6
Cronelane	38	391 0 0
Connorree	4	140 0 0
Tigrony	3	105 0 0
Ballygahan	12	47 8 0
Total	3437	£31,643 6 6

SOMERSET, AND ELSEWHERE.		
Mines.	Tons.	Amount.
Molland	37	160 0 6
Bookanion	15	£ 210 0 0
Giffich	15	131 7 0
Total	67	£501 8 0

SLAGS.		
Mines.	Tons.	Amount.
Waterloo	168	£ 590 14 0
French	82	435 13 6
Glasgow	172	211 15 0
Gloster	5	130 0 0
Total	427	£1368 2 6

COMPANIES BY WHOM PURCHASED.		
Companies.	Tons.	Amount.
Williams, Foster, and Co.	2250	£26,233 2 0
Mines Royal Company	1509	20,290 3 0
Vivian and Sons	2022	16,690 11 6
P. Grenfell and Sons	1020	14,050 14 3
Sims, Williams, and Co.	932	12,312 8 0
Copper Mines Company	719	8,202 4 6
Freeman and Co.	729	5,095 13 9
English and Australian Company	418	7,846 10 6
Mason and Elkington	287	5,306 11 6
British and Foreign Company	136	2,900 1 0
F. Bankhart	27	1,913 10 6
Total quarter ending September	10099	£123,801 10 6
Total quarter ending June	8414	115,441 7 6
Total quarter ending March	5119	91,622 11 6
Total for this year	23,632	£335,865 9 6

#### THE DUBLIN GREAT EXHIBITION.

AN ESTIMATE OF THE COST OF ITS CONSTRUCTION, AND OF THE VALUE OF ITS CONTENTS.

The cost of the building is principally comprised in the following items:—	
There are 80 cast-iron pillars to support the galleries, each pillar measuring 12 in. in diameter, and 36 ft. in length; calculating the weight of a single pillar at 36 cwt., and the price at 6 <i>l.</i> per ton, we arrive at the sum of	£364 0 0
It also requires 36 cast-iron pillars to support the large roof, each pillar measuring 36 ft. in length, and weighing 2 tons, which, at 6 <i>l.</i> per ton, amounts to	432 0 0
The roof, being an elongated dome, is formed of 144 semi-circular wood ribs, each rib weighing 8 tons, with a span of 100 ft. Each end of the roof has four ribs, weighing 4 tons per rib, and forming a segment of a circle. There are also 12 ribs in each 50 ft. hall to form the roof, weighing 2 tons each; and four half ribs at each end, weighing 1 ton each. The timber required for the ribs alone of the several galleries and halls, therefore, involved an outlay of 624 tons, at 3 <i>l.</i> per ton	1,872 0 0
The perlines, and the intermediate ribs in the skirtings, required an equal quantity of timber; for between every principal rib there are two segments of a circle to fill up, to form an equal roof. The quantity consumed, therefore, amounted to 624 tons, at 3 <i>l.</i> per ton.	1,872 0 0
The sash-bars which, with the glass, form the apices of the different roofs, are 1500 in number, and at 3 <i>s.</i> each amount to	225 0 0
The flooring required 200,000 superficial 3 in. deal, or 1500 tons, at 3 <i>l.</i> per ton	4,500 0 0
The counters, sideboards, stands, pillars, &c., involved an outlay in timber alone of	10,800 0 0
There are 136 wrought-iron lattice girders to support the floors of the several galleries, each girder weighing 10 cwt., which, at 16 <i>l.</i> per ton, amounts to	1,248 0 0
The quantity of glass consumed amounted to 90 tons, covering a surface of 143,000 feet, which, at 20 <i>l.</i> per ton, is	1,800 0 0
The quantity of lead used amounted in value to	473 0 0
The paint	3,459 0 0
Iron (wrought and cast) for various purposes	1,780 0 0
The average number of hands employed during the process of construction was 700. Of these, 250 were carpenters, 350 labourers, and 50 pairs of sawyers. The carpenters were paid at a weekly average of 22 <i>s.</i> , the labourers at 10 <i>s.</i> 6 <i>d.</i> , and the sawyers at 20 <i>s.</i> per pair. From the latter week in August to the middle week in May, there may be calculated 35 weeks, and estimating the aggregate of labour for that period, we have the following results:—	
350 labourers, at	£18 7 6= 6,430 0 0
250 carpenters, at	38 10 0= 9,625 0 0
50 pairs of sawyers, at	35 0 0= 1,750 0 0
Total cost of the building	£47,130 0 0
The total value of the contents of the building is estimated at 528,600 <i>l.</i>	

SALE OF EYAM MINING SHARES.—Messrs. Schofield and Son, of Sheffield, offered for sale, by auction, 20 of the newly-created shares in this successful mining company. They were sold by order of the directors, being shares which had become forfeited by the non-payment of the deposit in proper time by the allottees. As this was the first sale of the new stock, a considerable company assembled: the first lot of two shares, 4*l.* paid, sold at 10*s.* premium; for each succeeding lot the biddings were more numerous, and prices advanced to 25*s.* per share premium. Every lot was sold.

#### IRELAND.—ITS GEOLOGY AND MINING.—No. II.

BEING A GLANCE AT THE MINERAL RESOURCES AND THE GENERAL DISTRIBUTION AND CHARACTERS OF THE FORMATIONS CONSTITUTING THE GEOLOGICAL STRUCTURE OF THE ISLAND, MAINLY AS REGARDS THEIR BEARING ON THE AMELIORATION AND INDUSTRIAL PROSPERITY OF THE COUNTRY.

BY JOSEPH HOLDSWORTH, ESQ., M.G.S.P., &c.

We now come to an important deposit of the great coal formation series of strata, here comprised wholly, or mainly, of its lower members, containing valuable and extensive beds of anthracite coal; the whole reposing immediately on a vast development of millstone grit. This carboniferous field occupies a very considerable portion of western Ireland, constituting two vast irregular areas north and south of the estuary of the Shannon, together, extending from Killarney, through western Limerick and Clare to Galway Bay, and affording, for the most part, a new and noble field for the almost unlimited employment of skill and capital. And this remark is scarcely less applicable, as applied in the aggregate, to the extensive coal-fields of Kilkenny and Leitrim, in the latter of which several explorations are now in progress, likely to result in most important consequences.

Immediately from beneath the millstone grit and its associated beds, the carboniferous limestone emerges to the eastward, often in bold and serrated outline; the lower series mainly of which, spread out from hence, more or less, over the several counties of Tipperary, Limerick, Clare, King's County, Queen's County, Westmeath, Roscommon, Longford, Mayo, Galway, &c.; in short, chiefly constituting the great undulating plain of central Ireland. It forms the western boundary of the coal formations of Kilkenny, and is here and there interspersed with extensive deposits of the lower Silurian clay-slate rocks, and of the old red sandstone, especially in the south of Galway, eastern borders of Clare, and in Tipperary; throughout this tract these two great formations are singularly interposed with regard to their relative positions, and no less complex in their general outline; nearly the whole of this vast area may be said to be composed of the most productive lead-bearing strata in the whole geological series, the mineral riches of which have as yet been but very partially explored. Some astonishing deposits of lead ore have, however, been discovered in the lower limestone east of Clare. One of this class was found in a bog at Ballyhickey, where a north-east and south-west line was intersected by a tributary vein, in the angle of 45°; at this point the mass of ore was from 15 to 20 feet wide, in places almost pure. This massive branch, or bunch, extended to a length of 40 feet, and still ore at the depth of 11 fms. Near Quin, in the same county, a rich lead lode was worked which produced ore yielding 76 per cent. of lead, and 120 ozs. of silver to the ton. Antimony has occasionally been met with in this district. In the clay-slate in the gorge of Killaloe and other places lead and copper are wrought. In Tipperary alone, some ten copper and half-a-dozen silver-lead mines are now in operation.

An extensive maritime district next claims our attention, extending through Galway, Mayo, Sligo, and Leitrim, to Loch Earn, opposite Donegal Bay; and which is no less remarkable for the boldness, sublimity, and charming variety of its physical conformation than for the extremely complicated and interesting character of its geological details. Its general geognostic structure is comprised of granite, mica-slate, lower Silurian slate, upper, middle, and lower carboniferous limestone, greenstone, porphyry, metamorphic primary limestone, upper and lower old red sandstone, massive quartz, and the coal formation which is chiefly in Leitrim. These formations for the most part succeeding each other in rapid succession, and together often presenting a physiognomy at once fifth, rugged, and wild. The granite stretches along the whole of the northern coast of the fine bay of Galway, it is irregularly elliptical, stretching out about 36 miles in length by 12 broad. The mica slate reposes immediately on its northern skirts, and continuing northward forms, in tortuous outline, the whole of the extreme western coast, extending north and south of Clew Bay, with the exception of narrow strips of the old red sandstone and limestone on its borders; and a rather wide zone of lower clay-slate, forming Killery Inlet, and here constituting the finest mountain scenery in Ireland. In the mica-slate district, to the south of it, appear the abrupt and whimsical forms of the Twelve Pins, or Connemara Mountains, and which are here singularly intersected with a tract of quartzose, serpentine, and metamorphic limestone rocks, and from whence are derived some of the finest of the beautiful and unique green marbles of Galway. From Loch Corrib, in the vicinity of this range, the lower limestone extends northward, through Mayo to Sligo Bay, with occasional protrusion of granite, greenstone, and mica-slate; this calcareous tract being bordered to the north of Clew Bay by a considerable deposit of old red sandstone. The greater part of Leitrim, as before intimated, is occupied by its valuable coal-field; whilst from its northern borders to Donegal Bay the middle or calp limestone predominates.

Metalliferous indications are abundant in Connemara and neighbouring districts. The lead mines, chiefly of galena ore, at present in working are principally in limestone, though the lodes occasionally pass completely into the granite and slates, quartz or sandstone, the ore being found most abundant at or near the junction of two formations. In the igneous districts of Galway some ten copper and nine lead mines are at the present time in progress, two mines of sulphur ore and one of iron. Mayo, Sligo, and Leitrim, have as yet been but very partially explored for metallic veins; in the two former counties, there are eight or ten mines, consisting of copper, argentiferous lead, and sulphur ore; and in Leitrim a few of iron, copper, and lead.

Proceeding northward through Fermanagh and Tyrone into Donegal, we enter a district of great geognostic and mineralogical interest. The mica-slate is largely developed in this remote corner of Ireland; it trends in a north-east and south-western direction, occupying the greater part of Donegal, Londonderry, and Tyrone; it flanks the granite range of Donegal, and spreading southward to the neighbourhood of Omagh, there dips beneath the tract of old red and yellow sandstone, which occupies nearly the whole of the south of Tyrone to the borders of Loch Erne. To the north the mica-slate skirting Loch Foyle constitutes the promontory terminating in Inishowen Head. To the westward of this point enormous ranges of quartz split up and traverse this formation, till the confines of the granite are reached, where hornblende, gneiss, and greenstone rocks are interlaced in strange confusion. The wild and elevated granite range of Donegal runs from thence to the sea, about 18 miles, and being about 32 miles in length. The large district just adverted to is rich in metallic ores. This is especially the case where the junction of the mica-slate and granite occurs; the former is here traversed by numerous metalliferous lodes, and gold, copper, and tin occur. In various parts of the country some twelve or fourteen lead and copper mines of excellent produce, or promise, are in operation. The vicinity of Ballyshannon is productive in lead ore; zinc and sulphur ores also exist.

The north-east of Ireland (with the exception of a patch of mica-slate on the sea-shore) is occupied by the vast tabular masses of the basaltic series, comprising nearly the whole county of Antrim, and resting on the chalk, green sand, new red sandstone, and lias, as is finely shown in the mural precipices of Cavehill Mountain in the vicinity of Belfast. It would be foreign to our present object were we to go into detail respecting the various trap rocks (and their great variety of embedded minerals) composing this igneous area of more than 1000 square miles, and terminating in the sea to the north, in the stupendous columnar facades and spheroidal structures composing the Giant's Causeway; and being bordered on the west by a narrow irregular chain of old red sandstone mountains 2000 feet high.

Although we have necessarily no metalliferous discoveries to speak of as regards this vast basaltic district, we cannot entirely quit the plutonic region without just adverting to the industrial products contained in the tertiary and secondary rocks which fringe its eastern and southern escarpments. The upper strata of the new red sandstone here contain numerous veins of hydrous gypsum, and at greater depths rock salt. The latter was discovered about three years ago in borings for coal, made by order of the Marquis of Downshire. Three beds have already been discovered, the first, at a depth of 200 yards, was 22 ft. thick, the next 88 ft. thick, and the borings still continued in the third bed. A splendid specimen of this saline rock is in the Dublin Industrial Exhibition. In the valley of the Lagan repose the next strata in ascending order, composed of crystalline limestone, argillaceous nodular limestone, and thin-bedded lithographic slate, interstratified with blue clay beds. The newer stratifications of this vicinity constitute the only representatives of the Oolitic system in Ireland. Beds of lignite, or wood coal, occur in the alluvial and diluvial deposits on the southern borders of Loch Neagh.

[To be continued in next week's Mining Journal.]



## ON THE PRESENT STATE AND PROSPECTS OF GOLD WORKING IN ENGLAND AND IRELAND.

BY H. CLARKE, ESQ., C.E.

As the state of our gold resources now occupies in a considerable degree not only your space, but the attention of the public, I have thought it may be useful to state the result of the judgment at which I have been able to arrive as to the present extent and prospects of our gold resources. I may observe that, although my attention was called to the subject of our gold-bearing rocks some years ago, and was afterwards directed to it in connection with what I have published on California and Australia, I had no idea of the extent of our gold resources until Mr. Calvert informed me of his theory as to the existence of gold in Wales, and I had carried out an extensive and systematic investigation into all the evidence on the subject from the earliest period. This has involved a considerable labour; and, in conjunction with the local explorations of Mr. Calvert, has resulted in the determination of ten gold regions, more or less considerable, embracing 40 counties, and an area already of about 30,000 square miles.

The number of gold regions already determined will be hereafter extended. I have not yet been able to classify the evidence as to the gold localities in Gloucestershire, Shropshire, and the West Midland; nor can I determine whether the localities reported, or ascertained, in the midland counties of Scotland, are separate, or connected. The localities recorded in Aberdeenshire and Sutherlandshire have not yet been investigated in connection with the geological structure of the country. As to the west of Ireland, where it is to be expected gold localities will be found, I only know of one at present. As yet most of the gold localities recorded are in the clay-slate, or analogous formations; but I have strong grounds for forming the opinion that the auriferous area will embrace scattered patches and deposits in the superior formations. I have it in contemplation to obtain an examination and analysis of some of the soils in the London basin, analogous to those of Paris and Pontoise, reported to be auriferous by the French chemists. These may or may not prove to be of a profitable character.

Mr. Calvert and other explorers have a wide field open before them for their labours. What he has as yet surveyed embraces but a small proportion of the whole gold area; and it is so extensive that it will take him a long time to complete his self-imposed task. It is much to be regretted that discussions should take place, whether Mr. Calvert is or is not the discoverer of gold in a particular place, as the value of such labours consists in the identification and establishment of the practical productive character of districts hitherto neglected.

It may be convenient to divide our gold resources into two classes—ores and native deposits. The so-called gold ores consist of two classes—gold in quartz, slate, granite, oxide of iron, and iron pyrites; and gold associated with silver, lead, copper, iron, and zinc.

Gold ores seem to have been worked by the Romans, if not by some more ancient nations, at the Ogofof Mines, in Carmarthenshire; the Poltimore, in Devon; and Keswick, in Cumberland. Further investigations will result, no doubt, in the extension of this list.

In the middle ages gold ores were worked, or gold reduced, in Cornwall, Devon, Somerset, Shropshire, Cumberland, and Perthshire. A gold mania prevailed in the middle ages, which was checked by the discovery of America. At a later period the ores were worked in Devonshire, Somersetshire, Shropshire, Gloucestershire, Derbyshire, Bedfordshire, Northumberland, and Cumberland. Most of these workings were stopped by being seized into the hands of Crown grantees.

The mines known to me in which gold ores are now found, are—Wheal Tor, in Cornwall; Britannia, Poltimore, Exmoor Wheel Eliza, and Molen, in Devonshire; Cwm Heislan, Cwm Heislan Issa, Dolfrwynog, Berthlwydd, and Caegwernog, included in the former North Wales Mining Company, in Merionethshire; Hafod-y-Morfa, reported by Mr. St. Pierre Foley, the Goldcop Mine at Keswick; High Ireby Mine; the Alston Moor Mines; and Wanlockhead Mine. I do not include in this enumeration localities not worked as mines, nor sites of gold ores, for these are most numerous. Cwm Heislan did produce 7 lbs. weight of gold; but of these several mines enumerated, only the Britannia and Poltimore can be considered as at present in an active state, nor can they be said to be in full operation. The only gold produce from gold mines which has of late years come into the market has been from Cwm Heislan, the Britannia, and the Poltimore; and the yearly produce cannot yet be fairly stated. As to the extent of the district yielding gold ores, it is very great. They have been found in the West of England region, the Welsh region, the Northumbrian, the Lowland, the Highland, and the South Irish. Mr. Arthur Dean and Prof. Ansted have recognised ranges of gold-bearing rocks in the Snowdon group; and there is every appearance that Dartmoor is a great nucleus of gold ores. Of the ores obtained, I have seen perhaps 100 analyses; and they all confirm the rich character of our gold ores—ores of a quality such as to be in no other country neglected. From poorer ores Sardinia, Austria, the German principalities, Brazil, and Chili, yearly produce large amounts of gold.

Everything that has come under my notice confirms the statement of Mr. Mitchell and other assayers, that the gold ores of England have been systematically disregarded, or thrown away. Except what London refiners may do secretly, the only recent instance I know of gold being parted, or refined from other metal, was a case that occurred in Lancashire. It is stated to me that a young chemist was induced to examine some iron slag with which the roads were metalled; and, finding gold in it, engaged a neighbouring manufacturer at St. Helen's to enter into the operation; and they bought up the refuse, and obtained a considerable amount of gold from it.

As to the deposits of gold, it is now well enough known that the south of Scotland gold-field at one time yielded largely, though now only a few ounces. According to a statement in the *Mining Journal*, Wicklow still yields 2000l. a year to the Dublin goldsmiths, which constitutes the chief produce. Altogether, the produce and mode of working are contemptible. The extent of the gold area has been already stated, and that may be taken as its maximum. In speaking of a certain district as a gold region, it must, of course, be borne in mind that in most cases the gold will only be found in certain portions, which may prove inconsiderable in a large area. There is no report of surface diggings as yet from the Welsh gold region. The productiveness of the gold deposits has been proved where it has been tried—in Lanarkshire and Wicklow for instance; but it has yet to be proved as to the future by actual proceeds. The only points we have to guide us in forming our opinion are the geological character, the previous proceeds, and the mode of working. The geological characteristics are in favour of a productive area. The amount obtained from the two gold regions worked is considerable, and the gold was found in 2 and 3 lb. nuggets, so far as that may be taken as an indication. The ancient and recent modes of working are inefficient to produce a good yield of gold; and this is a presumption of a better produce for the future.

The total amount of gold to be obtained no one can have the presumption to speculate upon; we can only dare to assign limits. Taking the area of gold-fields in these islands at 30,000 square miles, in California at 200,000 square miles, and in Australia at 400,000 square miles, then it must be assumed as a probability that the produce here will be proportionately less. I am likewise of opinion that the ancient workings must have reduced the supply, unless mining superstition is right, and gold grows again. The amount of area as yet worked, however, is not 500 square miles, out of probably 30,000 square miles in these islands.

The working of gold ores and the refining of gold from other metals admits of a constant and steady supply of it to a considerable amount. Those who doubt the practicability of this may notice the progress of this country as to silver production. Although this branch of mining industry is in its infancy we have already taken a rank among the silver-producing countries of Europe. The following is M. Michel Chevalier's estimate of the value of silver produced:—

	1846.	1850.
Spain	£227,499	£440,210
Austria	282,750	286,971
Saxony	198,200	198,200
Russia	167,831	171,817
England	169,989	160,000
North Germany	138,379	138,379
Norway	32,346	35,607
Piedmont	7,444	7,444

New Granada produces 42,929l.; Brazil, 2227l.; and even Chili only 297,029l. Thus we already hold a fair rank, and can yet extend our operations. The amount of silver now obtained is a positive addition to the national wealth, heretofore neglected. The amount of gold produced by Austria in 1850 was 286,971l., and Piedmont 20,000l. The amount from

Austria includes river workings, but still it is a reflection on our mining industry that our gold ores produce a most inadequate return. I do not reckon, even at present, the whole produce of gold here from all sources as exceeding 7000l. a year; and it may fall much below this—whereas 100,000l. a year may well be obtained from ore alone.

In considering the prospects of gold mining in England, it is necessary to take into account the very oppressive nature of the Crown claims. As a constitutional and legal question, it is open to the strongest doubt whether the Crown is entitled to any royalties on gold at all, in England, Scotland, or Ireland; and it is very desirable that the holders of gold mining property, and directors and shareholders in gold mines, should take measures to obtain relief. The Crown's commuted claims in one case amounted to 15 percent, which would have been levied on the gross yield of the metal, without allowing for expense of reduction, still less for production. As these claims now stand, it is only possible to work the richest ores, and those of the common class, which are elsewhere profitably worked, can here only be refined at a loss. In countries where the mining law of Spain prevails there are no dues to landowners or holders of mineral rights, but here, in addition to 10 or 15 percent, to the Crown, a further heavy tax has to be paid to this class. Relief must, therefore, be obtained, if our gold ores are no longer to be thrown away or neglected. The law must likewise be settled as to working the superficial deposits, so that the diggers may not be exposed (as in Wicklow and Cork) to have a company of soldiers marched down upon them, and the deposit seized by the Crown. Hitherto people have been frightened by the Crown claims from working gold mines or gold deposits, and this is the chief reason why this branch of industry has been neglected. Within the present century the value of the gold lost is, perhaps, not less than 5,000,000l., and may amount to 10,000,000l. or more.

A circumstance which will most materially operate in restricting gold digging in this country is a high rate of wages in a period of full employment. Whenever this is the case the poorer diggings cannot be worked; indeed, in Australia only the richer ones are now worked, but then the standard of remuneration is three higher. When the best diggings are worked out in Australia, and the standard of wages is thereby reduced, the working of the poorer diggings will then be resumed; and in this country it is exceedingly unlikely that diggings yielding only a few shillings a day, and that as a lottery and speculation, will draw away men from remunerative employment. If, however, a free action is allowed, then whenever employment is slack, miners, navigators, returned Australian diggers, and various adventurers, will be tempted to a pursuit which under most circumstances yields some average returns, and which holds out the prospects of rich but rare prizes.

The general results, so far as there are the means at present of coming to an opinion, are that no action can take place on the currency, and no interference with labour; but that an opening is now provided by which, under legitimate guidance, a permanent addition may be made to the mining resources of the country. While arriving at this conclusion with regard to England, the same course of observation leads to different conclusions as to the general operations in the world at large from the progress of gold discoveries. England is no peculiar and exceptional example of a gold-producing country. The same investigations which have led me to determine such a large extent of gold area in England, have led to analogous conclusions with regard to other countries of Europe. France likewise is a considerable gold-bearing country, and will admit of extensive and profitable working, under more favourable circumstances than this country. Every river of Germany bears gold more or less; and every country of Europe would prove productive, if properly worked. The strong evidence which has been given as to the auriferous character of the great regions of Lapland and Finland has been neglected, but it cannot remain long so.

Turning our eyes abroad, the prospect of large gold-fields comparable to Australia and California is becoming more distinct. The Chaudire region seems to embrace Maine and the adjoining countries to a considerable extent; and Mr. Calvert has very justly pointed out the Silurian rocks of Canada as constituting another great gold-field. To the north Mr. A. Robinson is exploring Greenland, with every promise of success; and those who remember the early voyages of Frobenius and others to the adjoining regions, will recommend a renewed search for the reported gold regions to the west. Although the Texan discoveries have proved to be interested exaggerations, yet New Mexico, Sonora, Oregon, Vancouver's Island, and Queen Charlotte's Island, must be recognised as future sources of gold operations. In Peru, Carabaya is being reworked, and new localities are reported; and I may again point out that the basins of the Amazonas, La Plata, and Orinoco may realise the dreams of Sir Walter Raleigh. The evidence of a vast gold region in the basin of La Plata is already strong, and we may daily expect accounts of further workings, and the extension of the old diggings.

Expeditions are now out in South Africa, to ascertain the sources from which the Portuguese have obtained gold; and from the tenor of the last letters I have seen, we may look, by an early mail, to be informed that the Australian explorers in Natal have found gold there. They report an exact conformity in geological characteristics with the gold formation in Australia, and the Natal people in Australia confirm the comparison. The Great Karroo will, I anticipate, be found productive of gold, and as yet the gold regions of Africa are scarcely known to us.

The results of the workings and discoveries now in progress must be greatly to increase the supply and stock of gold, and thereby affect prices. While California alone was pouring in additional supplies, there was no reasonable ground for anticipating such results, but when Australia came in excess of California, the effects were produced, and we now witness them. Further sources of supply must have the same tendency, but although the demand for gold bullion will thereby become increased, we cannot yet say that such increase will be correspondent to the supply. We have before us a rise in prices like that which marked the Elizabethan era; but we have also before us a production of gold unexampled in the history of the world.

**GOLD IN SCOTLAND.**—Mr. John Calvert, in reference to a communication from Mr. George Vere Irving, published in the *Times*, says:—"The letter of Mr. Irving is very interesting, and I claim the discovery of gold in the region of Leadhills and Wanlockhead. May I beg you to allow me to correct a few erroneous and false impressions? I visited that locality for the purpose of coupling my own practical investigations with the fact that history points to that district as the spot where the largest quantity of gold has ever been obtained in the British Isles. Many of the miners had gold to sell when I was there, but the very rude and inefficient mode they seem to have recourse to fully explains the fact of its being obtained at too great a cost of labour to encourage their attention more than as a holiday recreation. Although I cannot say I claim the discovery of gold in that part of Scotland, I have found it in many new localities in Cumberland, Westmoreland, Carnarvonshire, and Devonshire; and I made this discovery—that the gold of the British Isles will give profitable employment to thousands, if they have only the experience that might be obtained by a month's sojourn at any of the gold-fields of Australia and California."

**AURIFEROUS QUARTZ.**—At the British Association, Dr. J. Blake read a paper on the "Comparative richness of auriferous quartz extracted at different depths from the same lode." The writer stated, that no shaft had yet been made in California deep enough to test the correctness of the opinion that auriferous lodes diminish in value as they descend, but he described a circumstance which seemed to confirm that view. A horizontal mass of auriferous quartz was discovered in Grass Valley, which measured 60 yards by 45, and was from 6 to 8 in. thick; in the centre it was depressed 10 yards below the surface, its edges dropping out all round. Every part of this mass had been removed, and was found to contain 1 oz. or 1½ oz. of gold to the ton; some part was extremely rich, affording 60 oz. to the ton. No continuation of this quartz vein could be found in the valley or surrounding hills, but at some distance above a similar vein occurred, in which the proportion of gold was much smaller. In another locality a more than average amount of gold had been obtained from a lode which appeared to have been the upper part of the vein. The writer had never heard of "nuggets" being found in mining operations. Mr. Strickland stated, that it was a popular opinion that the silver mines of the Andes were richer than the gold mines; but this was not the case with other metals, nor had any reason been assigned for the belief. The materials in mineral veins had been deposited by chemical action from water flowing through them, and probably rising up from great internal depths. He suggested, that the diminution of temperature or of pressure near the surface might have caused a greater deposition of gold in the upper part of the veins.—Prof. Harkness remarked, that lead veins in Scotland were as rich low down as in the upper part.

**LIQUID INDIA RUBBER.**—A correspondent of a New York paper, writing from Para, Brazil, says:—"There is a method in preparing the gum which has recently been patented, and which differs essentially from the usual curdling. The milk, as drawn from the tree, is bottled in large glass bottles and demijohns; a preparation of some chemical nature which is a secret, is mixed with the milk, and the bottles are securely sealed. In this way the gum is sent to the United States. Recurring 24 hours after exposure to the air, and forms a pure, white, solid, and remarkably strong rubber. There is only one house in Para which has the secret of this receipt, as I learn, and a member of the firm gives his personal attention to the preparation of the article, some thousands miles in the interior of the country. The proprietors of the patent—as they say in Para—have a contract from an American manufacturer to take all they can furnish at \$1 50c. per pound, and he uses it all up in making suspenders, garters, &c. The ordinary rubber, as gathered by Indians in the dry season, and is exchanged by them for the common whistles of the country, quite a pleasant beverage, cloth, and implements for extracting the milk. The merchants at Para buy it from second and third hands in preference to extracting it themselves, as they find that the Indians work better when hunting on their own account than when operating for employment."

## WEEKLY LIST OF NEW PATENTS.

## APPLICATIONS FOR PATENTS, AND PROTECTION ALLOWED.

A. Prince, Trafalgar-square: Carriages.—W. Baines, Croydon-terrace, Birmingham: Railways.—T. Allan, Adelphi-terrace: Electric conductors and insulation.—J. L. Talbot, 57, Chancery-lane, Paris, and J. D. M. Stirling, The Larches, near Birmingham: Cast steel.—J. Shaw and J. Steinhil, Manchester: Artificial manure.—R. Oxland, Plymouth: Manure.—J. Hinks, G. Wells, and P. Dowler, Birmingham: Machinery for metallography.—J. Taylor, Manchester: J. Griffiths, Walsingham, and L. Lees, Stockport: Steam-boilers.—Dr. A. Carosio, Connaught-square: Power by electric currents.—J. and T. Shibley, Ashton-under-Lyne: Machinery for setting discs out of metal and other plates.—J. T. Jewell and D. Jewell, Horsedown: J. Furmoss.—J. Walker, Birmingham: Rotary engines by steam.—G. G. Stickey, Manchester-street, Pimlico: Machinery for forming metal.—J. Smalley, Bishopgate, Wigan, and W. Smirk, Ince, Wigan: Railway carriage-axles.—T. B. Uppill and W. Brown, Birmingham: Metallic bedsteads, &c.—H. Wilkinson, Warrington: Tottenhams: Steam, air, and water-engine.—J. Smith and A. Comerford, Birmingham: Marine pens and holders.—D. Law and J. Inglis, Glasgow: Moulding and shaping metals.—W. Grimshaw and Ellis Rowland Morsley, Antrim: Bridges.—H. Huxtable, Hockley-street, Hove, and R. J. P. Gibson, Upper Brunswick-street, Hackney: Improved composition for bricks, tiles, &c.

## WEEKLY LIST OF PATENTS SEALED.

J. Haskett, Wignore-street: Improvements in grinding stones and whetstones.—R. E. Peterson, Tottenham-court-road: Invention of an improved piston.—M. Poole, Avenue-road, Regent's-park: Improvements in gas regulators.—J. S. Norton and H. J. Borie, of Union-works, New Park-street, Southwark: Improvements in the manufacture of tiles and stairs from plastic materials.—A. V. Newton, Chancery-lane: Improved manufacture of cutting tools.—C. Harratt, Royal Exchange-buildings: Improvements in strengthening the masts of ships and vessels.—J. Barrans, Peckham-lane, Deptford: Improvements in steam-boilers.

**IMPROVEMENTS IN OBTAINING TIN.**—Mr. F. W. Emerson, of the Trefliffe Chemical-works, Penzance, has patented an invention, which consists in a means of purifying and separating the ore of tin from other metallic oxides, sulphates, arsenates, tungstates, or other compounds, previously to its introduction into the smelting furnace, by digesting the ore (either with or without the aid of heat) in a mixture of common salt, sulphuric acid, and nitrate of soda or potash; the last of these not being absolutely necessary to the success of the operation, though it helps to shorten the time in which the process is performed. The inventor first makes a correct analysis of a fair sample drawn from the bulk of the ore to be operated upon, in order to ascertain the exact nature and amount of the impurities. In the event of its being found to contain any compound of sulphur or arsenic, he first roasts or calcines the ore by any of the ordinary known methods. This process is not necessary, unless the impurities are present. If it is found to contain oxide of tin—the ore of tin consists of a stannous oxide—it will be necessary, in order to avoid loss, either first to peroxide it, or afterwards to precipitate from solution by the insertion of metallic zinc, or any other precipitating agent. To peroxidise the oxide of tin, he saturates the bulk of the ore to be operated upon with nitric or nitrous acid, and after allowing it to stand for two or three hours, to permit a full reaction to take place, he puts it into an iron, fire-clay, or other convenient retort, and distils or evaporates it to dryness, receiving the nitric or nitrous acid gases into stoneware or other convenient condenser, to be used over again. He then mixes the ore with such a quantity of common salt as by decomposition will sulphuric acid sulphate, and a small amount of muriatic acid to combine with the contained impurities of metallic oxides, or the oxides of iron and manganese in wolfram, or the time in tungstate of lime into a soluble state. He then puts the ore thus mixed with salt into a cistern formed of granite, slate, stoneware, or other material that is not seriously acted upon by acids (a wooden trough has been found to answer the purpose), and pours upon it such a quantity of either brown acid or oil of vitrol as will effect the decomposition of the salt. The tin ore is then left to stand for an hour or so, and the mixture is then stirred about from time to time with a wooden rake or shovel, so as to expose fresh surfaces to the action of the reagents, adding a small quantity, say 6 or 7 lbs. to the ton of nitrate of soda or potash, for the purpose of enlivening and quickening the operation. If the material should contain manganous or magnetic iron ores, it would be advisable to increase the amount of nitrate of soda or potash, to assist their oxidation and conversion. The invention also describes analogous methods of treating the ores when copper or tungstate is contained. *Claim.*—Purifying and separating the ore of tin from other metallic oxides, sulphates, arsenates, tungstates, or other compounds, by digesting the ore in a mixture of sulphuric acid and chloride of sodium, either with or without the addition of nitrate of soda or potash, with or without the application of heat by any known means.

**MANUFACTURE OF IRON AND STEEL.**—Mr. T. W. Dodds, of Holmes Engine and Railway-works, Rotherham, York, has patented some improvements in the treatment and manufacture of iron and steel. The invention thus specifies his *claims*:—1. A general arrangement of machinery. 2. The conversion of iron into steel, wholly or partially, by the use of a carbonaceous fuel, or a mixture of soda-ash, soda, potash, pearlash, or other alkaline matter, and carbonate or bi-carbonate of lime and charcoal. 3. The mode of converting iron, wholly or partially, into steel, by the use of a compound of soda-ash, lime, and charcoal, or any mixture of alkaline matter with carbonate or bi-carbonate of lime and charcoal. 4. The mode of treating iron, or partially or wholly converted metal, by plunging it when red-hot, or thereabouts, into a wet or dry bath—that is, either into water, or a solution of potash, soda, or other caustic matter, liquid ammonia, or ammoniacal liquor, a solution of soda, or hydrate of potash, or into a mass of dry carbonaceous material, as highly-carbonised sand, charcoal, and soda-ash, or other carbonaceous matter. 5. The mode of arranging and working the furnaces of conversion, wherein the retorts or converting chambers may be charged and discharged whilst they are in working condition, without being permitted to cool. 6. The mode of adjusting the anvil level of steam-hammers by means of a hydrostatic cylinder or chamber. 7. The mode of working hammer or tilt-levers, with, or without, the use of an atmospheric buffer for increasing the rapidity of the hammer strokes. The use of cork, or other partially elastic material, at the points of metallic connection of hammer details for the purposes described.

**WHEELS AND AXLES.**—Mr. T. W. Dodds has also patented some improvements in the manufacture of wheels and axles. *Claim.*—1. A general description of arrangement and construction of wheels and axles. 2. The method of binding together the detailed parts of wheels by means of coned or inclined surfaces on the spokes or nave of such wheels. 3. The application of conical or inclined bosses or naves for binding the spokes, arms, or segments up inside the tyre. 4. The mode of manufacturing tyres from bars coiled up, so as to furnish a continuous welding surface throughout the length of the coil; the contiguous surfaces of the folds being held together by dovetails or inclines. 5. The mode of manufacturing tyres by a combination of "voluted and spiral" coils. 6. The mode of retaining the folds or coils of tyre-bars together by the use of an external flanged or box piece. 7. The mode of making spokes from a combination of pieces individually formed with duplex or multi-angular ends, so as to dovetail or bind well together. 8. The use of the vapour of heated tar or bituminous matter, for the preparation of the wood used in the manufacture of wheels. 9. The treatment of wood used for wheels by boiling or steeping it in a compound of red-lead and bituminous matter.

**HYDRODYNAMIC BATTERY.**—Mr. A. Carosio, of Montagu-street, Middlesex, has patented a "hydrodynamic battery," or new and improved electro-magnetic apparatus, which, with its products, are applicable to the production of motive power, of light, and of heat. The invention consists in apparatus or machinery for decomposing water or other suitable liquid by means of electricity, obtained from an electrical apparatus constructed on the principle of that known as "Groves's gas battery," or a battery similar thereto, and in employing separately the gases so obtained for the production of motive power by their action, and also for the generation of recombinant such gases in the gas battery, to form the liquid from which such gases were originally produced, and in which recombination a current of electricity is generated for decomposing the water or other liquid employed.

**ELECTRIC LIGHT.**—Dr. J. J. Watson has just specified his patent for improvements in illuminating apparatus, and in the production of light. Dr. Watson *claims*:—1. The application of the mixed gases, oxygen and hydrogen, obtained from the decomposition of water by galvanic or other agency, to the purposes of illumination, by causing them to impinge during their ignition against certain non-combustible or nearly non-combustible radiating mediums, as lime, the earths, graphite, spongy platinum, &c., or certain compounds described by the inventor. 2. Increasing the light from the radiating body by surrounding it with a coil of fine platinum wire, or a battery similar thereto, and in employing separately the gases so obtained for the production of motive power by their action, and also for the generation of recombinant such gases in the gas battery, to form the liquid from which such gases were originally produced, and in which recombination a current of electricity is generated for decomposing the water or other liquid employed.

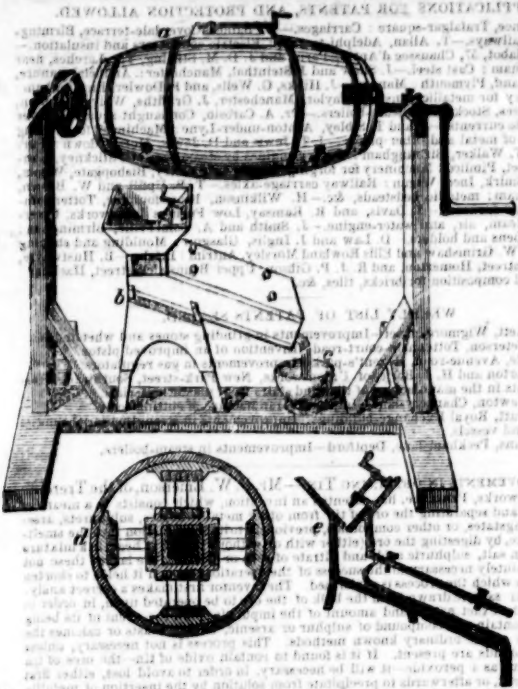
**ELECTRICITY.**—Mr. W. E. Staite, of Manchester, has specified his improvements in apparatus for producing and applying current electricity, parts of which apparatus are applicable for obtaining and treating certain chemical products resulting from electrolytic action. The inventor states his *claims* as—1. Certain specified improvements in electric lamps. 2. A mode of treating and preparing carbon or carbonaceous compounds for electrical purposes. 3. A mode or modes of connecting articles made of carbon or carbonaceous compounds with metals, for the purpose of producing and maintaining a more perfect contact between them. 4. The use of sheets of platinum gauze, to form the electro-negative elements, having metallic conductors attached thereto. 5. The construction of the cells of galvanic batteries with tubes at or attached to their bottom, combined with certain means whereby the same are charged and discharged. 6. The employment of plates composed of lead, alloyed with other metals, such as silver, or other metals, as positive elements in galvanic batteries, with any suitable solution. 7. An electric telegraph or alarm.

**RAILWAY IMPROVEMENTS.**—Mr. C. H. Wild, C.E., of St. Martin's-lane, has taken a patent for some improvements in fishes and fish-joints for connecting the rails of railways. The inventor *claims*:—1. The constructing fishes for connecting the rails of railways with a groove adapted for receiving the heads of the bolts or rivets employed for securing such fishes, and the application of such fishes for connecting the rails of railways. 2. The constructing fish-joints for connecting the rails of railways by means of fishes applied to the joints of divided or split rails. 3. The constructing fish-joints for connecting the rails of railways with fishes secured by three or more bolts and nuts or rivets, of which the central bolt or bolts, or rivet or rivets, is or are, of greater diameter than the extreme ones. 4. The constructing fish-joint for connecting the rails of railways with grooved fishes fitted to the sides of the rails, and secured to them by bolts and nuts or rivets, and having projecting wings firmly secured to, and resting upon, the sleepers or bearers, so as to support the rails by their sides and upper flanges. 5. The constructing fish-joints for connecting the rails of railways with rails and fishes, having the touching surfaces of one or both of them planed as described.

**ATMOSPHERIC RAILWAYS.**—Mr. W. Malins has patented certain improvements in the application of atmospheric propulsion upon railways. These improvements are particularly calculated for those atmospheric railways upon which numerous stations and frequent stoppages of trains are required. *Claim.*—The division of the traction tube into lengths, separated by air-tight partitions, such lengths being brought into communication with the exhaustion or vacuum tube as the carriages travel from station to station. *Mechanics' Magazine.*



## BAGGS'S PATENT IMPROVEMENTS IN EXTRACTING GOLD AND SILVER FROM THEIR ORES.



These improvements, but recently introduced, and already adopted by some of the leading gold companies, are not based upon any untried or theoretical notions with regard to the extraction of the precious metals, but they are founded upon the well-known results of extensive practical experience. Mercury is used in these arrangements as before, but under circumstances eminently calculated to extract the gold or silver with great rapidity and completeness. In the ordinary process of amalgamation the two objects aimed at are—1st, the separation of the mercury into innumerable small globules, so as to present an extended surface for the exercise of chemical attraction; and 2dly, to aggregate these globules into one mass, and so separate the metal from the quartzose debris which has been stripped of its auriferous treasure. These two operations, as at present conducted, consume a very great amount of time, in the first place; and they are always attended with a considerable loss of gold, as well as of mercury, from the difficulty of fulfilling the conditions upon which the success of the process depends. In California, where the system of gold mining is extensively practised, shaking tables are employed, which require to be made with the greatest exactitude, to produce anything like a profitable result.

In Asiatic Russia, the Brazil, Transylvania, and other places, the system, though based upon the same principle, is modified in detail and application so as to suit the peculiar character of the matrix in which the precious metal is found; but in every instance the operation is tedious, and the result imperfect, and attended with loss. If gold, like iron, could only be endowed with the property of attracting and being attracted by some subtle force operating at sensible distances, like that of a magnet, the process of extraction would be comparatively easy; or if, without destroying the liquidity of mercury, we could only cause it to assume the form of a sieve (which appears at first sight to be a physical impossibility), and then cause the material upon which we are operating to pass over and over again through the meshes of that sieve, it is obvious that we should realise the desideratum of an enormous surface of action, and multiply the points of contact between the combining substances to an extent hitherto deemed unattainable. Now, every chemist knows that when a fluid body acts upon a solid, the action is limited to the points of actual contact; so that if a globe of mercury were made to act upon gold quartz the surface would be exercising its power of affinity, while the interior of the sphere would be practically inactive; and though we are aware that the globules of mercury, in the ordinary process of amalgamation are mechanically small, yet chemically considered, they are very large, and hence their results of necessity a great waste of power, time, and material. The idea of a mercurial sieve, to which we have just adverted, forms the leading feature of the present invention; and the general arrangement of the apparatus will be understood by aid of the annexed diagram.

The amalgamator, *a*, which is represented in cross section at *d*, contains within it a series of sieves, radially arranged from the centre to the circumference. The barrel itself is made of wood, and mounted on a horizontal iron axis, and it is caused to revolve either by manual labour or by connecting the riggers fixed on its axis with any convenient source of power. The sieves are moveable; they are made of copper wire gauze, and when required to be used, they are taken from the barrel, dipped in a solution of nitrate of mercury for a few seconds, and then replaced. The solution instantly covers the entire surface of copper with a coating of mercury; and the barrel being now charged with the ore or quartz from which the gold is to be extracted, containing in addition a certain portion of metallic mercury, it is thrown into revolution, and the process of amalgamation commences.

We have just been inspecting one of these machines, made for the Alliance Californian Gold Mining Company. The capacity of the barrel is 60 gallons, and the total number of sieves 16. Taking into account the number, length, and diameter of the cylindrical wires which compose these sieves, the total surface presented to action is upwards of 160 superficial feet; and if we only suppose the barrel to make 100 revolutions to begin with, in the short time so occupied the materials which it contains will be brought into close and intimate contact with no less than sixteen thousand square feet of mercurialised surface—a surface incessantly renewed by the percolation of falling mercury, and as continually presenting its powerful attraction to the fine particles of gold which are made to pass through its meshes, considering the nature of these arrangements, we are not surprised at the statement of the inventor, that the process of amalgamation may thus be accomplished in one-tenth of the time usually occupied in effecting it, and that 90 per cent. of the mercury ordinarily required is saved. Not that a smaller per centage of this metal is added to each charge, but that 10 consecutive operations may be performed in the time now occupied in the reduction of a single charge; so that a given weight of mercury does ten times the work it has done hitherto. In a cheaper form of amalgamation, under this patent, the sieves are dispensed with, and replaced by amalgamated balls of copper, thrown loosely into the case with the quartz ore, and a proper quantity of metallic mercury.

When the necessary combination has been effected by either of the above means, it becomes necessary to separate the auriferous amalgam from the refuse material with which it is now associated. This is a process which commonly occupies time; and to take silver as an illustration, it is the practice in the European method of producing an amalgam of this metal from the rock, to cause the barrels in which the chemical union has been effected to be reduced in speed to about eight revolutions per minute, instead of making, as previously, from 20 to 25. By this means the minute globules of mercury are aggregated into one mass; but the operation is not effected under two hours, and even then a portion of the metal is lost. In the patent separator, figured above at *b*, and shown in cross section at *e*, the result required is obtained not in two hours, but in less than three minutes. The action of the apparatus will be understood better by reference to a simple experiment, which is easily performed.

If a basin containing a few ounces of mercury be filled with water, it will appear a matter of some difficulty to remove the metal without entirely emptying the basin; unless, indeed, it be removed by an iron spoon, or drawn upwards by atmospheric pressure. Let a strip of copper wire-gauze, however, be bent at right angles, so that the lower part, which must be held horizontally, shall have an area of two or three square inches, and let this be immersed in the mercury. Upon removing the gauze, it will be found to have greatly increased in weight, and almost all the bubbles will be seen to be filled with mercury. If, now, the mercurial-

ised portion of the gauze be inclined from a horizontal to a nearly vertical position, a good stream of metallic mercury will immediately flow from it, and clear the gauze from the superfluous metal. Indeed, a few such immersions and inclinations of the sieve, and all the mercury will be removed from the basin, and this by the joint influence of chemical affinity and cohesive attraction. In the patent separator we are now describing, the contents of the barrels are allowed to enter the hopper, and flow down the inclined pipe, or shoot, into the vessel below. This vessel is four-sided, and contains within it a series of mercurialised sieves, through which all the materials from the barrel must flow in their passage downwards. The globules of mercury no sooner come in contact with the sieves, than they are spread over the surface by cohesive attraction, and as the metal accumulates in quantity, it obeys the force of gravity, as in the experiment just referred to, and following the course of the wires, is deposited in a homogeneous mass at the bottom of the cup below. The fluid refuse passes in the same direction, but not being attracted by the wires, is separated from the mercury, and floats upon its surface. As it accumulates, it either overflows the cup and passes off, or it may be conveyed away by a waste pipe situated near the top of the vessel. There is a slide valve, with a screw adjustment, placed within the hopper to regulate the flow. It may, perhaps, be necessary to observe, for the information of non-chemical readers, that the strong nitric acid of commerce should be diluted with three or four parts of water to dissolve the mercury for the purposes of amalgamation, as above described.

We have as yet omitted mention of some important particulars, which deserve the notice of our readers. The new system introduced by the patent for effecting an amalgam of gold from quartz ore, and of afterwards separating that amalgam from the refuse debris with which it is associated, consists, as we before stated, in obtaining an enormously increased surface of contact between the combining bodies, and in introducing for the first time the principle of cohesive attraction, operating electively. The surface is obtained by immersing for a few seconds copper sieves in nitrate of mercury, by which means the whole of the wires are instantly covered with an active coating of quicksilver, which will retain its attractive power for gold during upwards of 24 hours, without the necessity of a renewal; and the after process of separation consists merely in causing the contents of the amalgamating barrels to flow through a series of mercurialised sieves, inclined to the horizon, whereby the fluid amalgam is attracted and permanently retained, and the waste suffered to pass on. It will be seen that in accordance with the chemical principle here introduced, the sieves are of necessity subject to wear, and it becomes of importance to ascertain the extent of that wear. As they are dipped in the nitrate solution but once every 24 hours, and that for only about three seconds each time, they will undergo during a whole month a total immersion of only 90 seconds; so that the destructive action arising from this source (and they are subject to no other) will be seen to be extremely small. Moreover, it is an easy matter to prevent any wearing of the sieves whatever; for which purpose they only require every few days to be subjected to heat for a short time, to drive off the mercury, and then covered with a thin coating of copper by the electrolytic process; and it is this coating merely which will afterwards dissolve when the sieve is immersed in the mercurial solution. The copper wires may be dispensed with altogether, and some other metal employed which is merely coated with copper. Some iron sieves are always placed in the barrels, for the purpose of breaking the loose mercury into globules at different points of the revolution, and assisting the process of combination. When the object to be attained is the extraction of silver, then iron must not be employed, except in the shape of balls, which will, of course, be destroyed, as under the system now pursued; and in lieu of copper sieves, copper balls should be used, well covered with mercury by immersion in the nitrate. With regard to the time occupied in effecting amalgamation by the present process. Every 60-gallons barrel will hold a charge of 500 lbs. weight of powdered quartz. The combination is effected in a quarter of an hour; and allowing another quarter of an hour for filling and emptying the barrels, the entire gold contained in 1000 lbs. weight of quartz can be extracted every hour. This gives a total for the 12 hours of between 5 and 6 tons; a very large quantity for a vessel of this size to dispose of in the time. The matter, we are given to understand, has already met the approval of some very high authorities in practical mining; and we have little doubt that it will shortly come into extensive use.

In addition to the Alliance Company, these improvements have been also already adopted by the Anglo-Californian, the Anglo-Australian, and several other companies; and great results are looked forward to from their application in California, the Antipodes, and elsewhere.

## PROGRESS OF MECHANICAL SCIENCE.

Mr. W. Fairbairn, at the British Association, delivered an "Introductory address on general improvements in mechanical science during the past year."—The first subject noticed was Ericsson's calorific engine, from which so much had been expected. It was constructed, he said, on the same principle as the air-engine of Dr. Stirling, invented ten years ago: the chief difference being, that the air in Ericsson's is passed through wire gauze to take up the heat, instead of through plates of iron. The great objection to the engine appeared to be that two-thirds of the power were wasted in passing the air through the gauze; and though it might be premature to pronounce an opinion before the results of the improvements lately effected were known, yet if so much of the power was required for taking up the heat, Mr. Fairbairn could not but think it must prove a wasteful expenditure of fuel. The improvements that during the last year had been made in the application of the screw propeller were opening a new era in the history of our war and mercantile navy, of which the recent review at Spithead might be considered an indication. We were now in a state of transition between the paddle and the screw, and he had no doubt that in the progress of time great improvements would be made in the construction of the engines, and in their applicability to the work, which would materially economise space and power in our steam-vessels.—Mr. Fairbairn next alluded to the construction of an immense steam-vessel, which had been undertaken by Mr. Brunel and Mr. Scott Russell, of such vast dimensions that it would stretch over two of the largest waves of the Atlantic, and would thus obtain a steadiness of motion which would be a preventive against sea-sickness. This mammoth steamer is to be 680 feet long, with a breadth of beam of 83 feet, and a depth of 58 feet. The combined power of the engines would be that of 2600 horses. The ship is to be built of iron, with a double bottom, of cellular construction, reaching 6 ft. above the water-line, and with a double deck, the upper and the lower parts being connected together on the principle of the Britannia tubular bridge, so that the ship will be a complete beam. It would thus possess the strength of that form of construction, and not be liable to "hog," or break its back, as had been the case with other ships of great length. The double bottom would be a means of increased safety in other ways, for if by any accident the outer shell were broken, the inner one would prove effectual to keep out the water. As an additional security, however, it was divided into ten water-tight compartments. The ship would be propelled by paddles and by a screw, which would be worked by separate sets of engines, so that if any accident occurred to the machinery of one, the other would be in reserve. He said that he had no doubt, if properly constructed, this ship would answer the expectations entertained of its capabilities and strength, and that it would form, when completed, the most extensive work of naval architecture that had ever been constructed.—The next subject to which Mr. Fairbairn adverted was the improvements making in the locomotive department of railways, particularly to an engine constructed for the southern division of the North-western Railway, from the designs of Mr. McConnell, which was the most powerful locomotive that had yet been made for the narrow gauge. The peculiarity of construction consisting in the great length given to the fire-box, in which the greatest amount of steam is always generated, and in the comparative shortness of the tubes, which were only half the usual length. The steam generated by the boiler was sufficient for any engine of 700-horse power. The engine was intended for an express train that would complete the distance from London to Birmingham in two hours. In manufacturing machinery there had also been great activity and progress during the past year; and it was gratifying, Mr. Fairbairn observed, to find accompanying this improvement in machinery a most prosperous condition in the working classes engaged in those manufactures—a prosperity which had never been equalled within his experience. He attributed this prosperous state of things to the combined operations of improvements in machinery and the removal of commercial restrictions. The improvement which he more especially noticed was that of a new combing machine, of French invention, applicable alike to cotton, to flax, and to wool. It combed the fibre instead of carding it, a number of small combs being applied in succession to the cotton or flax, by which means a much finer

yarn can be produced from the same material than is possible by the former processes. As evidence of the present activity and enterprise in manufacturing industry, Mr. Fairbairn mentioned the erection of a mammoth alpaca woollen manufactory, by Mr. Salt, of Saltaire, near Bradford, which was 550 feet long, 50 feet wide, and six stories high, besides offices, warehouses, and various other buildings connected with it. The steam-engines to drive the machinery would be equal to 1200-horse power, and the factory would employ upwards of 3000 hands. The cost of the whole would be upwards of 300,000*l.*, and the enterprise was that of a single individual. Mr. Fairbairn concluded his remarks of manufacturing progress by noticing the improvements introduced by Prof. Orce Calvert, of Manchester, in the process of smelting iron by previously removing the sulphurous vapour from coal and coke. The results had proved most satisfactory, the strength of the iron produced by this process being about 40 per cent. greater than that made in the ordinary way.

## STEAM BOILER EXPLOSIONS.

At the British Association, Mr. Fairbairn, C.E., read a paper detailing some very interesting results of researches made for the purpose of determining the strength of locomotive boilers, and the causes which led to explosions. These researches were entered into in consequence of some difference of opinion having arisen between Mr. Fairbairn and Mr. Wynn, connected with the railway department of the Board of Trade, as to the cause of the recent explosion of a locomotive engine at Longside. Mr. Fairbairn, upon examining the boiler a few hours after the explosion, found one side of the fire-box completely severed from the body of the boiler, the interior copper box forced inwards upon the frame, and, with the exception of the cylindrical shell which covered the tubes, the whole of the engine was a complete wreck. The engine was made in 1840 by Messrs. Sharp, Roberts, and Co., had been worked at a pressure of 60 lbs., and had run altogether a distance of 104,723 miles. The cylinders being only 13 in. diameter, the engine had, for some time past, been considered too light for passenger trains, and had been used principally as a pilot engine. The fire-box, originally 7-16 of an inch, was, at the time of the explosion, a little over  $\frac{1}{2}$  inch, and from its excellent condition might have been supposed but to have recently been put into use; it was perfectly free from flaw, and might, but for the accident, have travelled 100,000 more miles. The engine had been in the repairing shop about three months previous to the accident, and the whole of the stays had been tested by the hammer, in the usual mode. The only point which could admit of doubt as to the safety of the boiler, was with respect to the hold which the stays might have in the fire-box. Experiments, however, had proved that the force required to pull some of the stays out of a copper-plate similar to the fire-box into which they had been screwed could not have been less than a pressure of about 300 lbs. per square inch. It required a dead weight of 8204 lbs. to pull out the "stay," and as each "stay" had to support a surface of 27 square inches, it would require a pressure of 303.85 lbs. per square inch to strip the boiler. Supposing the stays to be rivetted and sound in other respects, it would require a strain of not less than from 450 lbs. to 500 lbs. upon the square inch, in order to strip the screws or rivets the stays asunder. In the case of locomotives of more recent construction, where the stays were thicker, and formed into squares of from 4 to 4½ in., the resisting force would be increased from 700 to 800 lbs. on the square inch, or at least seven times the working pressure. Considerable stress had been laid upon the weakness of the stay which united the flat surface of the boiler to the sides of the firebox. The experiments made, however, clearly indicated that the firebox stays were not the weakest parts of a locomotive boiler, and that we had more to fear from the top of the furnace, which, under severe pressure, was almost invariably the first to give way. Great care, therefore, ought to be observed in the construction of this part. The cross-beams should not only be strong, but the bolts by which the crown of the firebox was suspended should also be of equal strength. It was in order to determine, if possible, by actual experiment, the laws on which these powers were founded that he had undertaken this series of experiments. The directors of the London and North Western Railway Company had placed in Mr. Fairbairn's hands an engine of the same age, constructed by the same makers, and in every respect a facsimile of that which had exploded. The engine was subjected to hydraulic pressure in the following manner. The boiler was furnished with a valve of one inch area, and the lever gave as the weight upon the valve 35 lbs., the scale being suspended indicated 50 lbs. The abstract of the results was the following:—

No. of lbs. on scale.	Weights upon valve.	Remarks.
Lever Scale	35	
1	50	
2	65	
3	80	
4	95	
5	110	With this pressure a leakage was observed at some of the joints.
6	125.5	
7	140	Leakage increased.
8	155	
9	170	
10	185	Leakage still increasing.
10	200.5	
10	207.5	

With this last pressure one of the bolts of the cross-bar over the fire-box broke, which caused the experiment to be discontinued, as the leakage was greater than the fore pump could supply.

It had been stated that the steam could not have been raised from 60 lbs. pressure per square inch for that stated by Mr. Fairbairn, in so small a space of time as 25 minutes. Experiments, however, tested by Bourdon's steam gauge, had shown that the pressure could be raised from 30 lbs. to 80 lbs. per square inch in 11 minutes. It was considered necessary, however, to carry these experiments to a still higher pressure than 80 lbs., and to ascertain not only the exact time but the rate of increase, and the current of temperature of the steam in the boiler. In order to carry out these experiments two delicately constructed thermometers were prepared by Mr. Dalgette, and Bourdon's pressure gauge having been adjusted with a column of mercury, the following results were obtained on the 7th May, on a locomotive engine with the safety valve screwed down and the fires lighted under the boiler:—

Time.	Pressure.	Mean temperature.
2h 44m	11.75	213° 0'
2 45	14.15	216 75
2 46	16.35	251 0
2 48	22.35	259 75
2 50	28.95	268 37
2 52	35.75	277 0
2 54	44.25	286 37
2 56	52.75	295 37
2 58	63.75	304 25
3 0	74.75	313 0
3 2	87.25	322 0
3 4	101.15	331 0
3 5	108.75	335 62
3 6	111.75	

This experiment was lost, the thermometer not indicating a higher pressure. The results deducible from these experiments were the rate of increase in the accumulating force of the steam, and the equivalents in temperature corresponding thereto. In the first experiment the pressure was raised from 30 to 80 lbs. in 11 minutes, but in the latter from 11.75 to 111.75 or not less than 100 lbs. in 22 minutes. Other experiments were made for the purpose of testing the strength of stays of the fire-box. Two thin boxes, each 22 in. square and 3 in. deep, were constructed, one of them corresponding in every respect to the sides of a fire-box of the exploded boiler, the other of the same thickness of plates, but the stays arranged in squares 5 in. asunder. Tested by hydraulic pressure, it was found on the 19th experiment that, with a pressure of 785 lbs. per square in., the sides swelled .08 in., and with the 20th, with a pressure of 815 lbs. the box burst by drawing the head of one of the stays through the copper, which from its ductility, offered less resistance to the pressure on that part where the stay was inserted. These experiments were conclusive as to the superior strength of the flat surfaces of a locomotive fire-box, as compared with the top or cylindrical part of the boiler; but other experiments, in which the stays were closer together, showed that a resisting force was obtained much greater than any which it could possibly have to sustain. For instance, in the case of boilers where the stays were arranged in areas of 16, instead of 25 square inches, he had found, on the 47th experiment, that a pressure of not less than 1625 lbs. on the square inch, producing a swelling in the sides of 0.34 inch, was required in order to draw the stay through the plate after sustaining the enormous strain for one minute and a half.

CANDLES FROM IRISH PEAT.—A specimen of candle from Irish peat has been exhibited at a meeting of the Ulster Harbour Commissioners; it is of a pure white colour, quite transparent, and apparently quite to the finest wax. It was forwarded to the Board of Trade, and is named the "Paraffine Candle."







## Board of Trade.—Department of Science and Art.

METROPOLITAN SCHOOL OF SCIENCE  
APPLIED TO MINING AND THE ARTS.

DIRECTOR.—SIR HENRY T. DE LA BECHE, C.B., F.R.S.

The following COURSE OF LECTURES AND PRACTICAL DEMONSTRATIONS will be given NEXT SESSION, which will COMMENCE on the 1st October, with an INTRODUCTORY LECTURE by Prof. E. FORBES:—

1. CHEMISTRY, with special reference to the Arts, A. W. HOFMANN, Ph.D., F.R.S.
2. NATURAL HISTORY, applied to Geology and the Arts, E. FORBES, F.R.S.
3. PHYSICAL SCIENCE, with its special Applications, R. HUNT.
4. APPLIED MECHANICS, H. WILLIS, M.A., F.R.S.
5. METALLURGY, J. PERCY, M.D., F.R.S.
6. GEOLOGY, with its practical Applications, A. C. RAMSAY, F.R.S.
7. MINING.—A. MINERALOGY, W. W. SMYTH, M.A.

The Royal College of Chemistry, now the Chemical Laboratory of this School, receives pupils at a fee of £10 for the term of 14 weeks. The same fee is charged in the Metallurgical Laboratory. The fee for matriculated students (exclusive of the laboratory) is one payment of £30 for two years, or two annual payments of £20—this fee includes full instruction.

Tickets to separate courses of lectures are issued at £3 and £4. Officers in the Queen's, or E. I. Company's Service, acting mining agents and managers, may obtain them at half the usual charge. H. H. H. the Prince of Wales has granted two Exhibitions to the school, and others have also been established.

For information, apply to Mr. T. Hicks, registrar, at the school, Jermyn-st., London.

## Board of Trade.—Department of Science and Art.

THE AUTUMN SESSION will COMMENCE on the 1st OCTOBER, when COURSES OF LECTURES AND PRACTICAL DEMONSTRATIONS IN SCIENCE will be given in the METROPOLITAN SCHOOL OF SCIENCE, Jermyn-st.; and in ART at MARLBOROUGH HOUSE.

The SCIENTIFIC COURSE includes Chemistry, Natural History, Physical Science, Applied Mechanics, Metallurgy, Geology, Mining, Mineralogy, and Practical Instruction in the Laboratory. The ART COURSE embraces Freehand and Mechanical Drawing, Perspective, Colouring, Practical Construction, and various technical applications of Art.

The courses are intended to impart a knowledge of the principles of science and art involved in manufacturing and mining processes to those who may desire to carry them into practical and industrial pursuits. Special attention is also devoted to the training of teachers in a knowledge of science and art.

Prospectuses and further information may be obtained at Marlborough House, Pall Mall; or at the Metropolitan School of Science, Jermyn-st.

## MINERALOGY.—KING'S COLLEGE, LONDON.—

Prof. TENNANT, F.R.S., will COMMENCE a COURSE OF SIXTEEN LECTURES ON MINERALOGY, with a view to facilitate the study of GEOLOGY, and of the application of mineral substances in the ARTS. The lectures will be illustrated by an extensive collection of specimens; and will BEGIN on FRIDAY, 7th October, at Nine o'clock, A.M. They will be continued on each succeeding Wednesday and Friday at the same hour.—September, 1853.

R. W. JELF, D.D., Principal.

FOUNDRY FOR SALE.—TO BE SOLD, BY PUBLIC ROUP, within the King's Arms Inn, Ayr, on Tuesday, the 18th day of October, 1853, at One o'clock in the afternoon, in virtue of the powers contained in bonds and dispositions in security, the AYR FOUNDRY, recently erected on the most approved principle, having FOUR CUPOLAS, THREE DRYING STOVES, TURNING and FITTING SHOPS, extensive SMITH SHOPS, PATTERN SHOPS and STORES, and COUNTING-HOUSE of five apartments; also, LIME KILN and COKE OVENS. The foundry is well adapted for supplying the English and foreign markets with castings, &c. The premises are situated on and extending to 1 A. 2a. 27 1/2 Imperial or Scotch, and are adjacent to the Glasgow and South-Western Railway, and within half a mile of the harbour of Ayr, with which the railway communicates.

The situation of the premises, and the nature of the trade carried on at the business of Ayr, afford facilities for working the coke ovens and lime kiln to great advantage. To ensure competition, the whole will be exposed at the upset price of £900.

For particulars, apply to Hugh Miller, jun., merchant, Ayr; John Gray, writer, County-buildings, Ayr; or Thomson and Elder, W.S., No. 5, South Charlotte-street, Edinburgh.—Ayr, Sept. 19, 1853.

IRON-WORKS FOR SALE.—On the Continent, in a district ABUNDANT IN ORE AND COAL, consisting of two BLAST-FURNACES, producing 18 to 20 tons each every 24 hours; BLOWING ENGINES, 75-horse power each; a superior ROLLING MILL, with 80-horse engine and every improvement; can be set to work in 24 hours, and will produce at least 10,000 tons of rails or merchant iron annually; turning shop, foundry, and every other convenience; tools of all kinds; aggregate steam-power, 250-horse; water 100 ditto. A railway runs through the works, communicating with one of the first ports of Europe, and with a large portion of the Continent. Estimated profit upon present cost of manufacturing, £15,000 to £20,000 per annum. Price moderate. Orders may be obtained for 12 or 18 months should the purchaser choose to contract.—Apply, by letter only, to "B.Z." care of Mr. C. Mitchell, general advertising and newspaper press directory office, Red Lion-court, Fleet-street, London.

VERY EXTENSIVE AND IMPORTANT FREEHOLD PREMISES, comprising numerous BUILDINGS, and about 6 acres of LAND, in the City of Bristol.—TO BE SOLD, either together or separately, the ST. PHILIP'S IRONWORKS, situated close to the Great Western Railway, and Exeter Railway, having a water frontage of 1150 ft. The buildings are on a large scale, and were used by the late owners for engineering purposes; have been recently erected in a superior manner, of the best materials, and may be easily converted into several and separate suitable premises for a soap house, chemical works, brewery, tan yard, cotton, flax, saw, or grist mill, or any manufactory requiring extent, securing to each valuable water frontage.

The portion constituting the forges and smithies of the long-established firm of Agnew and Co. cannot be improved on; it has a water-dock within the premises, and coal can be obtained within a few hundred yards.—altogether presenting a singularly advantageous opportunity to re-establish the lucrative business carried on by the late proprietors in this department.

For plans and particulars, apply to Messrs. Osborne, Ward, and Co., solicitors, Bristol; or to Edwin Naish, auctioneer, 7, North-street, Bristol.

CASTLE EDEN COLLIERY.—TO BE SOLD, BY PRIVATE CONTRACT, the CASTLE EDEN COLLIERY, situated 3 1/2 miles from Hartley, in the county of Durham, comprising the entire PLANT OF WINDING and PUMPING ENGINES, STOCK of all descriptions, PITMEN'S COTTAGES, &c.

This colliery produces a first-class steam coal, well known by the name of "steep West Hartley." At present, the steam coal seam only is being worked, to the extent of about 110,000 tons annually. The powers of production may, at very little expense, be increased to 150,000 to 200,000 tons annually. In addition to the steam coal seam, there are the High Main and Hutton seams, which form a good household coal. The extent of royalty at present under lease is 1500 acres, adequate to supply an annual sale of 150,000 tons of coal for upwards of 60 years.—Any further information may be obtained on application to Mr. John Taylor, Haswell Colliery, Durham.—Sept. 5, 1853.

FIRST-CLASS ANTHRACITE COLLIERY.—TO BE SOLD, BY PRIVATE CONTRACT, the WHOLE of, or a SHARE in, an ANTHRACITE, or STONE COAL COLLIERY in SOUTH WALES, now in full operation, and producing coal of the best quality for iron and steam purposes, and for melting and hop drying.—Apply to Messrs. Blunt and Shadwell, 13, Austinfriars, London.

NORTH STAFFORDSHIRE.—VALUABLE COAL AND IRONSTONE MINES TO BE LET.—TO BE LET, BY TENDER, for 21 years, under about 31 acres of land, situated near Newcastle-under-Lyme, in the county of Stafford, the undermentioned valuable COAL and IRONSTONE MINES:—BLACKBAND, consisting of ironstone 2 feet thick, coal 18 in. thick; RED SILLAG, consisting of one band of ironstone 4 ft. 6 in. thick, coal 2 ft. 3 in. thick; RED MINE, consisting of one band of ironstone 6 ft. thick, coal 12 in. thick. A winning of about 126 yards deep will clear out the whole of the three mines, a considerable portion of which is considered unwatered by the adjoining colliery operations. These mines require no commending, their quality being so well known. There are FOURTEEN other MINES of COAL and IRONSTONE, lying under the same lands, which will be leased with the other, all known to be good in quality. This estate adjoins the White Barn Estate, in which the above three named mines are, and have been successfully worked for several years.—Tenders to be sent in to Mr. Thos. Harding, solicitor, Newcastle-under-Lyme, on or before Tuesday, the 18th day of October next, stating minimum rent, and rent per ton for ironstone calcined, also rent per ton for coal, or rent per statute acre for each mine. Plans and sections may be obtained by applying to Mr. W. S. Cope, mine agent, Halford-cottage, Hanley, Staffordshire.—Newcastle-under-Lyme, 15th September, 1853.

COLLIERY TO BE LET.—TO BE LET, FOR a Term, a valuable COAL and IRONSTONE COLLIERY, embracing 65 acres of land, situated in the parish of St. Martin's, in the county of Salop, under which FIVE SEAMS of COAL have been proved of the thickness and depth from surface following, viz.:

Yards deep.	Thickness.
1	33
2	50
3	57
4	78
5	86

The colliery is most advantageously situated, as the lands adjoin both the Ellesmere and Chester Canal, and Shrewsbury & Chester Railway, and are in a neighbourhood affording a large land sale.—For further particulars, apply to Messrs. Longueville and Williams, solicitors, Oswestry.

THE GLOUCE SLATE QUARRIES, PEMBROKESHIRE, TO BE LET, FOR a TERM.—The above valuable SLATE and FLAG QUARRIES, situated in the upper or northern part of the county of PEMBROKE, hitherto constantly conducted by the proprietor, Mr. John Owen, will (owing to the increasing demand, which the proprietor, in consequence of other engagements and declining health, is unable to attend to) be immediately LET ON LEASE for a term of years. Any person or company capable of commanding a moderate capital, combined with scientific and management, will undoubtedly find this opportunity most advantageous and lucrative, and in every respect worthy of attention. The slates and flags are unquestionably superior to any in South Wales, and for durability are not to be surpassed by any in the principality.

The quarries lie within seven miles of the market and post town of Newcastle Emlyn, nine of the seaport and market town and post town of Cardigan, and about six of the South Wales Railway. The contemplated lines of railway (the North and South Wales and Manchester and Milford Line, and the Carmarthen and Cardigan) will pass within an easy distance of the quarries.—For particulars, enquire of Benjamin Evans, solicitor, Newcastle Emlyn; or John Owen, 195, Regent-st., London.

NEW PATENT ACT, 1852.—Mr. CAMPIN, having advocated the Patent Law Reform, before the Government and Legislature, and in the pages of the Mining Journal, &c. is now READY to ADVISE and ASSIST INVENTORS in OBTAINING PATENTS, &c. under the NEW ACT.

The Circular of Information, gratis, on application to the Patent Office and the Registrar, 156, Strand.

## LANELLY LOCAL BOARD OF HEALTH.

TO IRONFOUNDERS, ENGINEERS, AND OTHERS.—Notice is hereby given, that the LANELLY LOCAL BOARD OF HEALTH are ready to receive TENDERS for the SUPPLY OF DELIVERY of sundry IRON PIPES, SLICES, and various CAST and WROUGHT-IRON WORK.

Drawings, with specifications of the same, can be seen, and form of tender obtained from Mr. John H. Taunton, Brimscombe House, Stroud, Gloucestershire; and at the office of Mr. Griffith Harris, Park-street, Lanell, on or before Friday, the 23rd inst. All tenders must be made according to the prescribed form, and delivered to me at the office of the said Board of Health, on or before Four o'clock, on the 4th day of October next. The Local Board of Health do not bind themselves to accept the lowest, or any tender.

By order of the Lanell Local Board of Health, Lanell, Sept. 16, 1853.

## LANELLY LOCAL BOARD OF HEALTH.

TO ENGINEERS, MACHINISTS, AND OTHERS.—Notice is hereby given, that the LANELLY LOCAL BOARD OF HEALTH are ready to receive TENDERS for the SUPPLY AND DELIVERY of a quantity of 2-in. HYDRANTS.

Each tender must be accompanied by a drawing and explanation of the sort of hydrant proposed to be supplied, and must be delivered to me at the office of the said Board, on or before Four o'clock, on the 4th day of October next. The Local Board of Health do not bind themselves to accept the lowest, or any tender.

By order of the Lanell Local Board of Health, Lanell, Sept. 16, 1853.

## THE LATE STEAM-BOILER EXPLOSION, WITH LOSS OF LIFE, AT LEEDS.—MEDWIN'S PATENT WATER-GAUGES ARE SELF-

INDICATING, simple, show the exact quantity of water in a steam-boiler, may be understood by the most inexperienced person, will prevent explosion or collapse of tubes for want of water, are applicable to all boilers, and are made with or without danger-whistles.—May be seen, with testimonials, by applying to Messrs. Ogden and Goldard, 2, Turnwhorl-lane, Cannon-street, City.

COCHRAN'S CRUSHING MACHINE.—One of these MACHINES is NOW ERRECTED at the BRITISH and COLONIAL REDUCTION WORKS, ORDNANCE WHARF, ROTHERHITHE, under the management of Messrs. Taylor and Sons. It is capable of crushing quartz, or any other hard substance, at the rate of 10 to 15 tons per day. By the use of the small sized machines gold quartz can be crushed and amalgamated at the small running cost of One Shilling per ton, without any loss of the quicksilver employed. The above is now on view between the hours of Eleven and Three daily.—Applications for tickets to be made to W. J. Valentine, 22, Austinfriars, where any other information can be obtained, and where orders for machines will be received.

The patentee, in introducing this machine, which has been attended with such beneficial results, and of which there is practical illustration from the application of the process at the present time, and the rapid progress, as evidenced by the numerous orders lately received, would refer to the following testimonials, from Capt. W. Verran and from P. Pierce, of New York:—

I take much pleasure in contributing to the many testimonials you possess as to the benefit you have conferred on the mining interest by your wonderful though simple invention—viz., the quartz crushing machine, the operation of which I have had the pleasure of witnessing, and examining its merits at the works of Messrs. Taylor and Sons, Rotherhithe. Being a miner of long experience, I could unhesitatingly recommend your machine to my mining friends, as the most perfect and economical that has been introduced to the public; and many mines that have been unproductive heretofore can now be made profitable by using your machines, owing to the rapidity with which they crush the ore.

WILLIAM VERRAN.

New York, February 21, 1853.

DEAR SIR.—It gives me pleasure to say I have noticed the operations of your gold quartz crushing machine for several months past. I observe it has a rotatory and spinning motion, like the earth. The laws of nature and art are consulted and combined, accomplishing all the exigencies the times seem to require, and the improvements of the age demand. It is of great power and capacity, and with it old abandoned mines of various descriptions will be made valuable, and will be worked with success. Many iron ores so hard to smelt will now be worked with ease and profit. Every ironmaster in the land will need one, especially if they work the hard ores.

The granite hills of New England will be a source from which the farmers will supply themselves with the necessary tools, until it will bring forth like the great alluvial bottoms of the west. The copper of Lake Superior and Texas, the gold of Australia, California, and Golconda, as well as the silver of New Mexico and Potosi, will all pass through this wonderful machine.

Circumstances will compel its use, and time will develop its real value. I consider it of vast importance to the world, and the thousand and one uses to which it will be applied will ere long be seen and felt by all the civilised nations where gold, silver, copper, iron, or lead are known.—I am Sir, your obedient servant, P. PIERCE.

J. W. Cochran, Esq.

New York, February 21, 1853.

THE CHEAPEST AND MOST POWERFUL QUARTZ CRUSHER

yet invented is BAGGS'S STEAM STAMP, protected by a double patent. A small 4-horse engine will crush 30 tons of quartz or ore in 12 hours. The engine is complete in itself, and needs no separate steam-engine, or other motive power, to keep it in action.—To be seen every day at 92, Blackfriars-road.

These stamping-engines are capable of CRUSHING BLOCKS A FOOT SQUARE.

EXTRACTION OF GOLD AND SILVER FROM THEIR ORES.

THE NEW RAPID AMALGAMATOR (BAGGS'S PATENT) requires ONLY HALF the usual amount of MERCURY, and effects an enormous SAVING OF TIME in the process of AMALGAMATION. THE NEW MERCURIAL SEPARATOR, secured under the same patent, effects a complete separation of the mercury from the residue, after the process of amalgamation is complete, in the space of a FEW SECONDS, instead of requiring, as at present, a tedious operation of some two hours.

In these machines, improved mechanical arrangements are aided by the most powerful chemical affinity, and from the principles introduced, it is next to impossible for a particle of gold to escape. The three following companies have already adopted these important improvements:—The Anglo-Californian Gold Mining, the Alliance Californian Gold Mining, and the Anglo-Australian Gold Mining Company.

For terms of license, and other particulars, apply to Mr. Isham Baggs, Mining Journal office, 26, Fleet-street.

## THE NEW STEAM STAMPS, FOR CRUSHING GOLD QUARTZ AND METALLIC ORES.—(BAGGS'S PATENT).

These powerful MACHINES are now TO BE HAD at a SHORT NOTICE, and of any number of horse-power, from four to twenty.—All communications to be addressed to Mr. ISHAM BAGGS, at the office of the Mining Journal, 26, Fleet-street.

A 4-horse Steam stamp, complete, £130, royalty included, for cash, and other sizes at proportionate rates.

The following Testimonial of the power and efficacy of these engines is from the manager of one of the smelting establishments in South Wales, where steam stamps, of moderate power, under this patent, have been for some time in operation:—

TO ISHAM BAGGS, ESQ., LONDON.

DEAR SIR.—In reply to your letter of inquiry about the action of your Patent Stamping Machine, I beg to say, that I have now had it fully at work for two months; the quantity of coarse metal it will crush with ease is about 20 tons in 10 hours—about two-thirds is crushed fine, the remainder would require to be stamped a second time, to reduce it to the same fineness. The steam used is very little, and the crushing force very great; large lumps of the metal (which is very hard) are immediately broken down—whereas by the use of large, as ordinary paying stamps, I am now putting up the second machine which you sent me, and have no doubt it will give (as the first has already done) entire satisfaction. I am quite convinced that the principle is excellent, and far superior to any other mode of crushing.

Spittly Copper Works, Lanell. I am, yours, &c., ALFRED TRUMAN.

The patent stamps may be used with atmospheric pressure, through the medium of a water-wheel or other prime mover. The application is extremely simple, very powerful, and where a motive-force is ready at hand, the machines cost less than when steam is employed.

## NOTICE.—TO GOLD COMPANIES, AND THE MINING

WORLD GENERALLY.—THE NEW STEAM STAMPS.—One of these powerful ENGINES HAS JUST BEEN ERRECTED, and is NOW SET TO WORK, at Messrs. MEDWIN and HALL'S, Engineers and Portable Engine Makers, No. 92, BLACKFRIARS ROAD, where it may be seen in operation daily, and its powers subjected to any required test. These stamps, after the most careful inspection, have already been adopted by the following companies:—

THE ENGLISH and AUSTRALIAN COPPER COMPANY.

THE ANGLO-CALIFORNIAN GOLD MINING COMPANY.

THE ALLIANCE GOLD MINING COMPANY.

THE ANGLO-AUSTRALIAN GOLD MINING COMPANY.

THE MEXICAN and SOUTH-AMERICAN MINING COMPANY.

THE ST. JOHN DEL REY (Gold, Brazil).

THE LIVERPOOL LEAD MINING ASSOCIATION (Spain).

THE LONDON and CALIFORNIA GOLD QUARTZ CRUSHING COMPANY.

THE ALMADEN MINING and SMELTING COMPANY (Spain).

THE SAN FERNANDO LEAD MINING COMPANY (Carolina, Spain).

And they are about being adopted by several other companies and private individuals, who have carefully tested the results of their crushing powers, and submitted their capabilities to the most severe tests. In proof of the utility of these engines, it may be observed, that the saving in manual labour which they will effect to one company alone (the St. John del Rey) will amount to many thousands pounds sterling per annum.—For cards to view the engine at Messrs. Medwin and Hall's, apply, by letter, to Mr. Isham Baggs, Mining Journal office, 26, Fleet-street, London, where any further particulars may be obtained on application.

## IMPROVED STEAM HAMMERS.—MR. ISHAM BAGGS IS

now prepared to SUPPLY ironmasters, engineers, manufacturers, and miners, with STEAM HAMMERS and STAMPS of the most IMPROVED CONSTRUCTION, for forging and hammering iron and other metals, driving piles, and stamping and crushing gold quartz, metallic ores, and minerals of every description. By the introduction of a principle recently patented by himself, in conjunction with Mr. Frederick Bramwell, C.E., no less than FIFTY PER CENT. of the STEAM now used is SAVED.

While the above is in progress, much harder than in the engines now in use. The NEW STEAM STAMPS, for crushing ores, have been adopted by many of the leading companies, and they are now at work in various parts of North and South America, Australia, and England. They are eminently adapted for spalling, as well as crushing to fine powder, and they effect an enormous saving in superseding manual labour. A four-horse steam-stamp complete, with all the latest improvements, £140 (royalty included), for cash; a twenty-horse engine ditto, £650, and other sizes at proportionate rates. Contracts to any extent undertaken.

For further particulars, apply to Mr. Isham Baggs, Mining Journal office, No. 26, Fleet-street, London.

## MINING.—MUCH MINING WEALTH REMAINS UNEXPLORED

in consequence of the large capital necessary to try the real value of mining property. This object is now accomplished for a SMALL OUTLAY, without delay, by the HIRE of MEDWIN and HALL'S PATENT PORTABLE STEAM-ENGINES, for pumping, winding, &c. These engines may be rented for any time required, of 10, 14, 20, or 30-horse power, and upwards; are strong, simple, mounted on broad wagon-wheels, horse-shafts to remove at pleasure, may be set to work without delay at fixing brick-work chimneys, &c. Several are ready for delivery, either at rental or purchase.—Apply to Messrs. Medwin and Hall, engineers, 92, Blackfriars-road. Some of the above engines are already employed in mining purposes.

## THE PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY.

DEPARTURES OUTWARDS.

INDIA AND CHINA, via EGYPT.—For Aden, Ceylon, Madras, Calcutta, Penang, Singapore, and Hong Kong, on the 4th and 20th of every month from Southampton; and on the 10th and 26th from Marseilles.

AUSTRALIA via SINGAPORE.—For Adelaide, Port Phillip, and Sydney (touching at Batavia), on the 4th November, and 4th of every alternate month thereafter from Southampton; and on the 10th November, and 10th of every alternate month thereafter from Marseilles.

MALTA AND EGYPT.—On the 4th and 20th of every month from Southampton; and the 10th and 26th from Marseilles.

MALTA and CONSTANTINOPLE.—On the 27th of every month from Southampton.

SPAIN and PORTUGAL.—For Vigo, Oporto, Lisbon, Cadiz, and Gibraltar, from Southampton, on the 7th, 17th, and 27th of every month.

CALCUTTA and CHINA.—Vessels of the Company ply occasionally (generally once a month) between Calcutta, Penang, Singapore, Hong Kong, and Shanghai.

For further information, and tariffs of the Company's rates of passage-money and freight, for plans of the vessels, and to secure passages, &c., apply at the Company's offices, 122, Leadenhall-street, London; and Oriental-place, Southampton.

## PATENT SAFETY FUSE.—THE GREAT EXHIBITION PRIZE

MEDAL was AWARDED to the MANUFACTURERS of the ORIGINAL SAFETY FUSE, BICKFORD, SMITH, and DAVEY, who beg to inform Merchants, Mine Agents, Railway Contractors, and all persons engaged in Blasting Operations, that, for the purpose of protecting the public in the use of a genuine article, the PATENT SAFETY FUSE has now a thread wrought into its structure, which, being patent right, infallibly distinguishes it from all imitations, and ensures the continuity of the gunpowder.

This Fuse is protected by a Second Patent, is manufactured by greatly improved machinery, and may be had of any length and size, and adapted to every climate.

Address.—BICKFORD, SMITH, and DAVEY, Tuckingmill, Cornwall.

## SAFETY FUSE.—Messrs. WILLIAM BRUNTON and CO., PEN-

HALLICK, near REDRUTH, CORNWALL, MANUFACTURERS OF FUSE, of every size and length, as exhibited in the Great Exhibition of 1851, and supplied to the Royal Arsenal at Woolwich, the Arctic Expedition, and every part of the globe. Messrs. BRUNTON & CO. are at all times PREPARED to EXHIBIT UNLIMITED ORDERS for SUPPLYING FUSE direct from their own MANUFACTORY, upon warrant that it will prove equal to, if not better, than any to be procured elsewhere.

## GALVANIZED IRON ROOFS, AND WIRE STRAND FENCING.

MR. HENRY J. MORTON, GALVANIZED AND CORRUGATED IRON ROOFING WORKS, No. 93, ALBION STREET, LEEDS, the ORIGINAL MANUFACTURER of the PATENT STRAND FENCING, formed of twisted wires, for parks, pleasure grounds, railways, inclosures, &c. Upwards of 600 miles have been fixed in this country, and it is admitted to be the most efficient fence in use. Price from 1s. 4d. to 3s. per yard, fixed, according to the kind of fence.

IRON RAILS, GATES, and solid WIRE FENCING, manufactured at low prices.

GALVANIZED GAME NETTING, very strong and neat, and NEVER REQUIRING PAINTING, 2 ft. wide, and 2 in. mesh, 7d., 9d., and 1s. 0 1/2d. per yard.

GALVANIZED IRON GUTTERS, never want painting, 9d., 1s., & 1s. 4d. per yd.

GALVANIZED IRON ROOFING, for farm buildings, mills, sheds, &c.

ASPHALTED ROOFING FELTS, 1d. per square foot.

GALVANIZED SIGNAL CORD, formed as a twisted cord or rope, for mines, from 1s. per 100 yards.

For prices, drawings, and estimates, apply at the manufactory, 93, Albion-street, Leeds. Sole Agent for the Fire Annihilator Machines, and Kuper's Improved Patent Wire Ropes.

## LOANS IN CONNECTION WITH LIFE ASSURANCE.

Individuals possessing real or personal property, officers in the army or navy, clergymen, professional men, merchants, tradesmen, and persons of respectability, may, by ASSURING with the TRAFALGAR LIFE ASSURANCE ASSOCIATION, OBTAIN ADVANCES, for periods varying from one month to any other period, upon the following securities:—Upon freehold or leasehold property in England; upon reversions, annuities, sign-manual pensions, or any other description of assignable property, or income in connection with life assurance. Upon personal security, by the borrower procuring responsible securities to join in a bond, or other security for re-payment, and on condition of the life of the borrower or, at least, one of his sureties, being assured for a proportionate amount.

Applications for detailed prospectuses, forms of proposal, agencies, and all other information, are requested to be made to

Chief Offices, 40, Pall Mall, London. THOMAS H. BAYLIS, Manager and Sec.

## TRAFALGAR LIFE ASSURANCE ASSOCIATION.

Capital £250,000, fully subscribed for by a registered and most responsible proprietary, consisting of several hundreds of shareholders.

(Incorporated by Act of Parliament.)

CHIEF OFFICES.—40, PALL MALL, LONDON.

The business of this association embraces the granting of:—1. Life assurances in healthy, declined, doubtful, or diseased lives.—2. Guarantees for fidelity of trust combined with life assurance.—3. Immediate and deferred annuities.—4. Loans in connection with life assurance on personal and other securities.

The whole of these four important branches of business are transacted by this association on the most favourable terms.—For prospectuses and all other information, apply to

N.B. Agents wanted throughout England and Scotland. THOMAS H. BAYLIS, Manager.

## GUARANTEE FOR FIDELITY OF TRUST, COMBINED

WITH LIFE ASSURANCE.—THE DIRECTORS of the TRAFALGAR LIFE ASSURANCE ASSOCIATION GRANT POLICIES combining the above objects on peculiarly FAVORABLE TERMS.—For forms of proposal, terms, and all other information, apply to

Chief Offices, 40, Pall Mall, London. N.B. Agents wanted throughout England and Scotland.

## DISEASED, DOUBTFUL, OR DECLINED LIVES.

THE DIRECTORS of the TRAFALGAR LIFE ASSURANCE ASSOCIATION GRANT ASSURANCES at MODERATE RATES of premium, not only on the LIVES of persons who have been REJECTED by other offices, but also on those who may be suffering from consumption, asthma, bronchitis, pneumonia, disease of the heart, apoplexy, epilepsy, disease of the liver, dropsy, scrofula, gout, rheumatism, &c.—For forms of proposal, and all information, apply to

Chief Offices, 40, Pall Mall, London. THOMAS H. BAYLIS, Manager.

N.B. Agents wanted throughout England and Scotland.

## AGENCY.—THE DIRECTORS of the TRAFALGAR LIFE AS-

SURANCE ASSOCIATION continue to receive APPLICATIONS from respectable parties (accompanied with references) RESIDENT in the various towns in ENGLAND and SCOTLAND, for the AGENCY of this institution. The commission allowed is highly remunerative, while the important and numerous branches of business undertaken afford greater facilities than at most other offices for the exertions of active and influential agents.



<i>Shares.</i>	<i>Paid.</i>	<i>Last Price.</i>	<i>Present.</i>	<i>Shares.</i>	<i>Paid.</i>	<i>Last Price.</i>	<i>Present.</i>
			45	1900 Swamond Budeck	61c		15

\* Our object is to make the Share List correct: it must be obvious we cannot do so without the constant assistance of the concerned. We, therefore, earnestly call upon all who have the power, to aid us, by forwarding any alterations or corrections which may, from time to time, come under their notice. Reports from mines, notices of meetings—in fact, mining intelligence of every description, forwarded to our office, will meet ready attention.

London: Printed by RICHARD MIDDLETON, and published by HENRY ENGLISH (the proprietors), at their office, No. 26, Fleet Street, where all communications are requested to be addressed.—See number 21. 1855.